L Number	Hits	Search Text	DB	Time stamp
1	11	(("5,821,246") or ("4,166,735") or ("5,710,158") or ("5,773,476") or ("5,654,307") or ("5,789,427") or ("5,480,883") or ("5,646,153") or ("5,457,105") or ("5,616,582") or ("4,074,057")).PN.	USPAT; US-PGPUB	2004/01/05 11:38
2	813	(quinazolin or quinazolinyl) with (amino or anilino)	USPAT; US-PGPUB	2004/01/05 11:39
3	400	((quinazolin or quinazolinyl) with (amino or anilino)) and (sulfonyl or sulphonyl)	USPAT; US-PGPUB	2004/01/05 11:40
4	271	(((quinazolin or quinazolinyl) with (amino or anilino)) and (sulfonyl or sulphonyl)) and (furyl or furanyl)	USPAT; US-PGPUB	2004/01/05 11:40

EAST
10/030,527

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NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	SEP 09	CA/CAplus records now contain indexing from 1907 to the present
NEWS	4	DEC 08	INPADOC: Legal Status data reloaded
NEWS	5	SEP 29	DISSABS now available on STN
NEWS	6	OCT 10	PCTFULL: Two new display fields added
NEWS	7	OCT 21	BIOSIS file reloaded and enhanced
NEWS	8	OCT 28	BIOSIS file segment of TOXCENTER reloaded and enhanced
NEWS	9	NOV 24	MSDS-CCOHS file reloaded
NEWS	10	DEC 08	CABA reloaded with left truncation
NEWS	11	DEC 08	IMS file names changed
NEWS	12	DEC 09	Experimental property data collected by CAS now available in REGISTRY
NEWS	13	DEC 09	STN Entry Date available for display in REGISTRY and CA/CAplus
NEWS	14	DEC 17	DGENE: Two new display fields added
NEWS	15	DEC 18	BIOTECHNO no longer updated
NEWS	16	DEC 19	CROPU no longer updated; subscriber discount no longer available
NEWS	17	DEC 22	Additional INPI reactions and pre-1907 documents added to CAS databases
NEWS	18	DEC 22	IFIPAT/IFIUDB/IFICDB reloaded with new data and search fields
NEWS	19	DEC 22	ABI-INFORM now available on STN

NEWS EXPRESS	DECEMBER 28 CURRENT WINDOWS VERSION IS V7.00, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
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FILE 'HOME' ENTERED AT 08:55:40 ON 05 JAN 2004

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

10/ 030,527

FILE 'REGISTRY' ENTERED AT 08:55:49 ON 05 JAN 2004
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STRUCTURE FILE UPDATES: 2 JAN 2004 HIGHEST RN 633700-59-1
DICTIONARY FILE UPDATES: 2 JAN 2004 HIGHEST RN 633700-59-1

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when
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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

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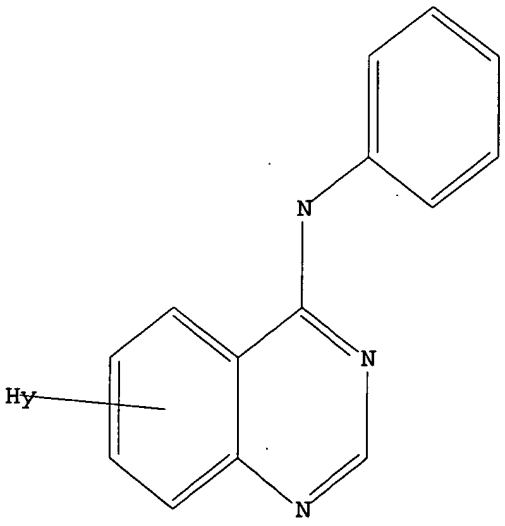
Uploading 10030527.str

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 ful
FULL SEARCH INITIATED 08:56:43 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 15256 TO ITERATE

100.0% PROCESSED 15256 ITERATIONS 131 ANSWERS
SEARCH TIME: 00.00.01

10/ 030,527

L2 131 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST [redacted]

FILE 'CAPLUS' ENTERED AT 08:56:50 ON 05 JAN 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 5 Jan 2004 VOL 140 ISS 2
FILE LAST UPDATED: 4 Jan 2004 (20040104/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l2
L3 20 L2

=> d l3 1- ibib abs hitstr
YOU HAVE REQUESTED DATA FROM 20 ANSWERS - CONTINUE? Y/(N):y

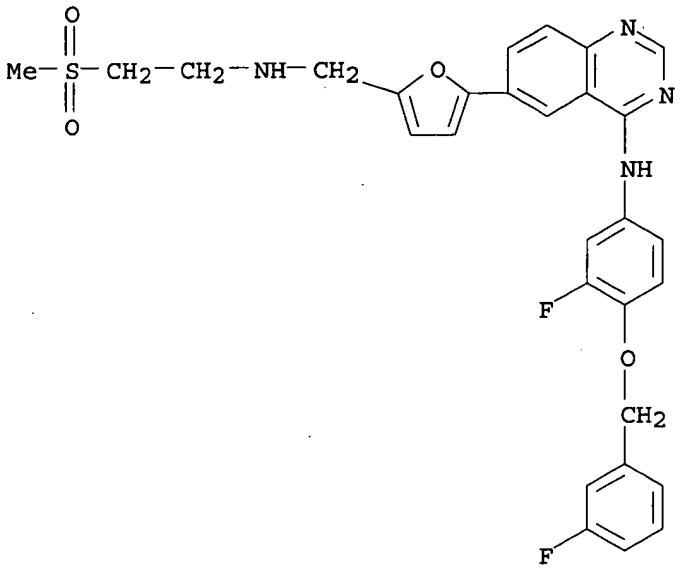
L3 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:971922 CAPLUS
TITLE: Preventives and/or remedies for subjects with the expression or activation of her2 and/or EGFR
INVENTOR(S): Suzuki, Tsuyoshi; Kitano, Yasunori; Yano, Shinji
PATENT ASSIGNEE(S): Mitsubishi Pharma Corporation, Japan
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003101491	A1	20031211	WO 2003-JP6988	20030603

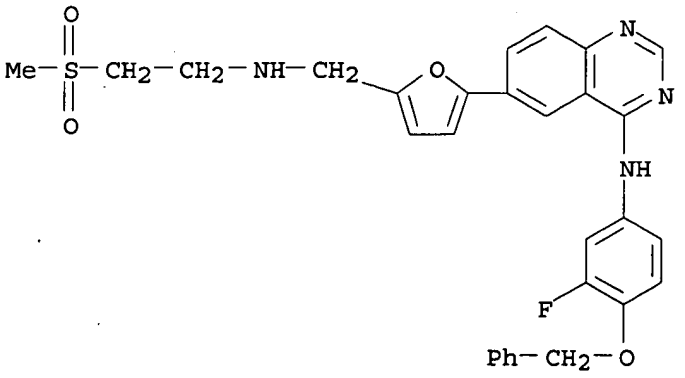
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,

GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: JP 2002-162130 A 20020603
AB Her2 and/or EGFR inhibitors to be administered to subjects with the overexpression or activation of Her2 and/or EGFR that have been subjected to an examn. for detecting the expression or activity of Her2 and/or EGFR and thus regarded as having the overexpression or activation of Her and/or EGFR; and medicinal compns. contg. such an inhibitor.
IT **231277-81-9 231277-90-0 231277-91-1**
231277-92-2 231278-00-5 231278-05-0
386744-56-5 633370-23-7
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(quinazoline analogs as preventives and/or remedies for subjects with the expression or activation of her2 and/or EGFR)
RN 231277-81-9 CAPLUS
CN 4-Quinazolinamine, N-[3-fluoro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)

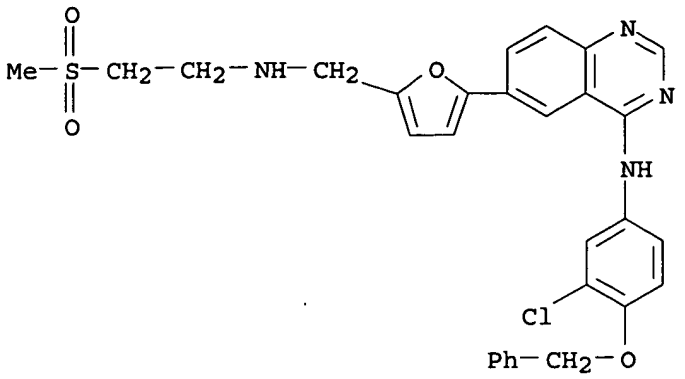


RN 231277-90-0 CAPLUS
CN 4-Quinazolinamine, N-[3-fluoro-4-(phenylmethoxy)phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)

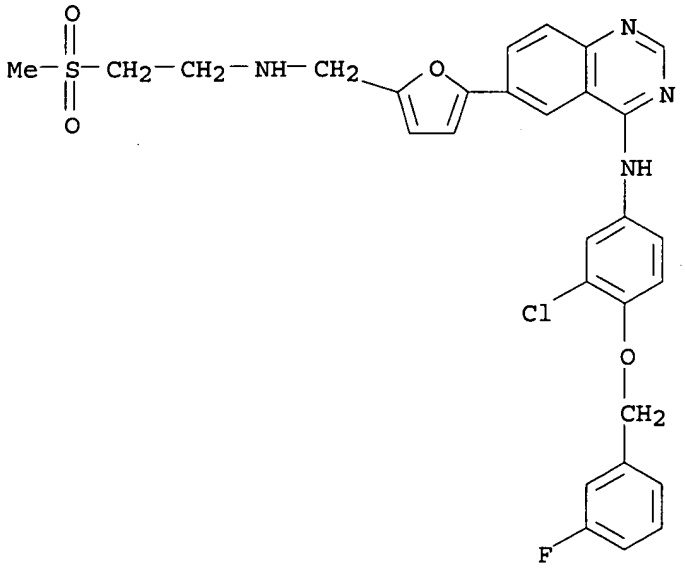


RN 231277-91-1 CAPLUS

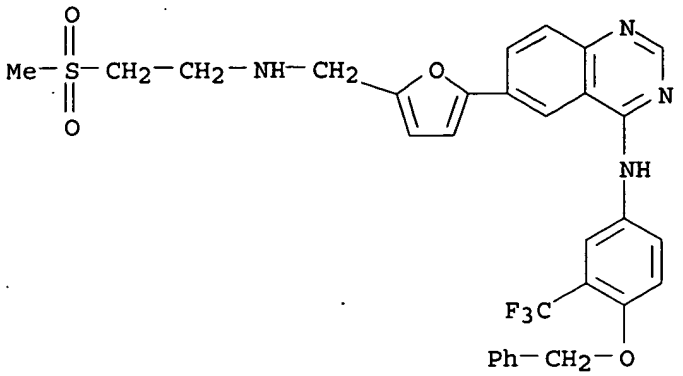
CN 4-Quinazolinamine, N-[3-chloro-4-(phenylmethoxy)phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



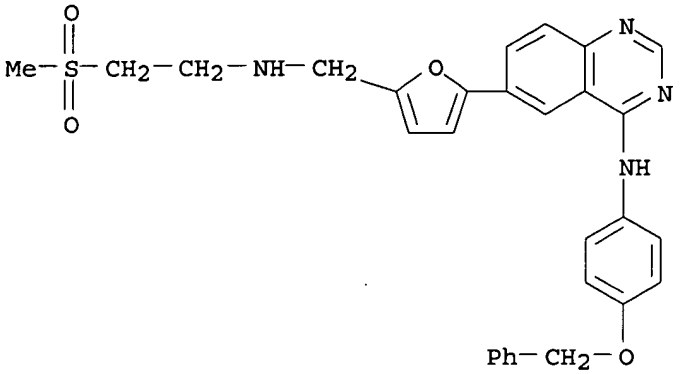
RN 231277-92-2 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



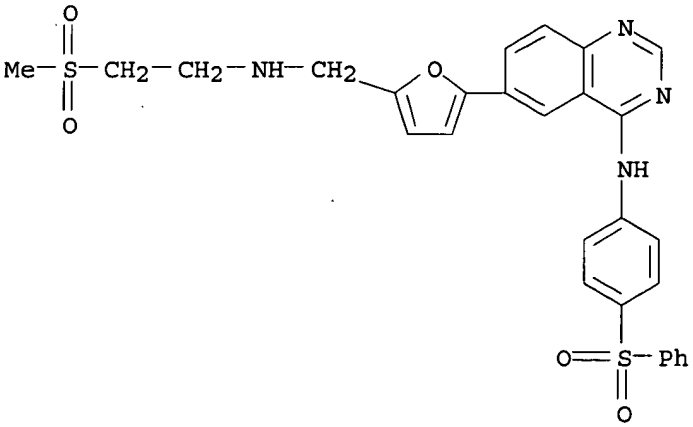
RN 231278-00-5 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)-3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



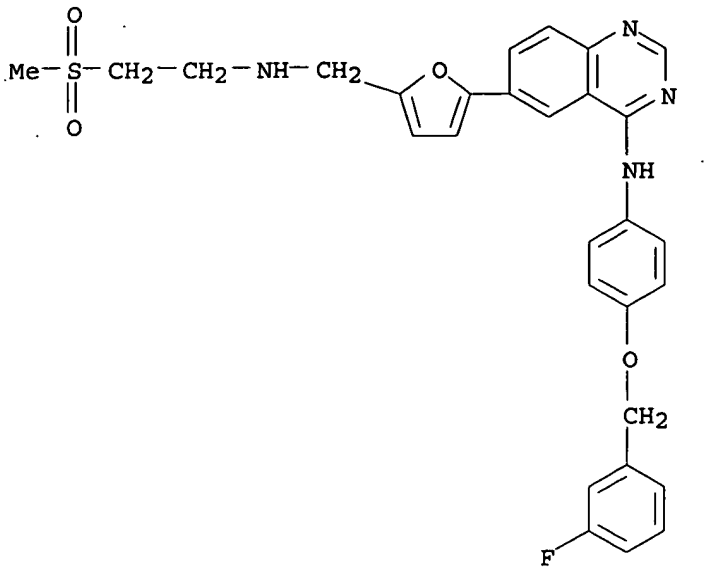
RN 231278-05-0 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



RN 386744-56-5 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)



RN 633370-23-7 CAPLUS
CN INDEX NAME NOT YET ASSIGNED



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:913005 CAPLUS
DOCUMENT NUMBER: 139:391384
TITLE: Use of inhibitors of EGFR-mediated signal transduction for the treatment of benign prostatic hyperplasia (BPH)/prostatic hypertrophy
INVENTOR(S): Singer, Thomas; Colbatzky, Florian; Platz, Stefan
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G., Germany
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003094921	A2	20031120	WO 2003-EP4606	20030502
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10221018	A1	20031127	DE 2002-10221018	20020511
US 2003225079	A1	20031204	US 2003-431699	20030508

PRIORITY APPLN. INFO.: DE 2002-10221018 A 20020511
US 2002-389815P P 20020618

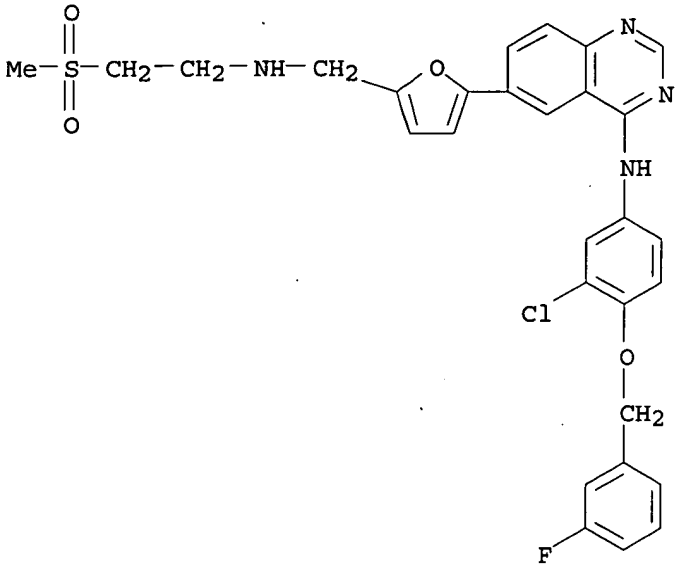
AB The invention discloses the use of EGF-receptor antagonists for the prodn. of a medicament to prevent and/or treat benign prostatic hyperplasia and/or prostatic hypertrophy, as well as a method for the treatment or

prevention of benign prostatic hyperplasia/prostatic hypertrophy involving the administration of an EGF-receptor antagonist, optionally in combination with known compds. for the treatment of benign prostatic hyperplasia/prostatic hypertrophy, and the corresponding pharmaceutical compns. Compds. of the invention include e.g. quinazoline derivs. and monoclonal antibodies. Prepn. of 4-[(3-chloro-4-fluorophenyl)amino]-6-[(4-(N-(2-methoxyethyl)-N-methylamino)-1-oxo-2-buten-1-yl)amino]-7-cyclopropylmethoxyquinazoline is described.

IT **231277-92-2**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(EGFR-mediated signal transduction inhibitors for treatment of benign prostatic hyperplasia/prostatic hypertrophy)

RN 231277-92-2 CAPLUS

CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



L3 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:836903 CAPLUS
DOCUMENT NUMBER: 139:317433
TITLE: Cancer treatment method comprising administering an erb-family inhibitor and a raf and/or ras inhibitor
INVENTOR(S): Spector, Neil Lee; Xia, Wenle
PATENT ASSIGNEE(S): Smithkline Beecham Corporation, USA
SOURCE: PCT Int. Appl., 173 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

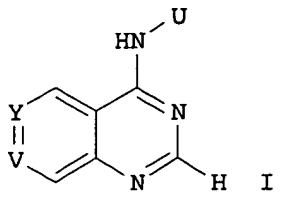
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003086467	A1	20031023	WO 2003-US10747	20030408

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,

PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-370807P P 20020408
OTHER SOURCE(S): MARPAT 139:317433

GI

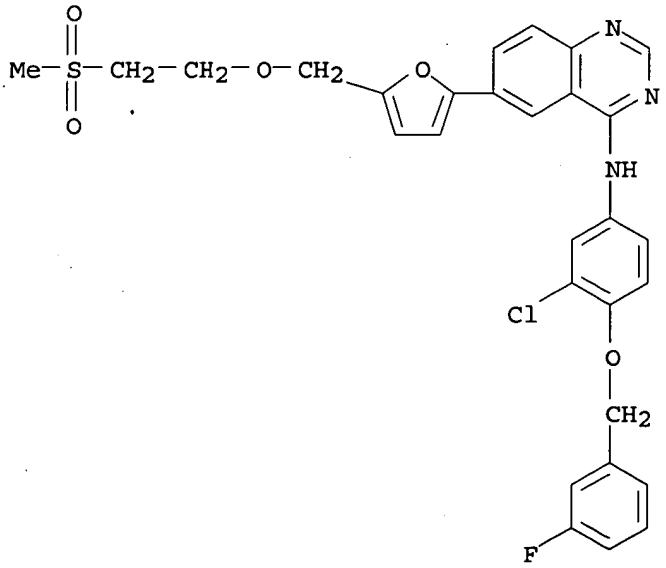


AB The invention provides a method for treating cancer in a mammal, as well as pharmaceutical combinations useful in such treatment. In particular, the method relates to a cancer treatment method that includes administering an erb family inhibitor and a Raf and/or ras inhibitor to a mammal suffering from a cancer. Prepn. of compds., e.g. erbB-2/EGFR inhibitor I, is described.

IT **319917-44-7P 319917-46-9P 320337-12-0P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(erb-family inhibitor and raf and/or ras inhibitor combination for cancer treatment)

RN 319917-44-7 CAPLUS

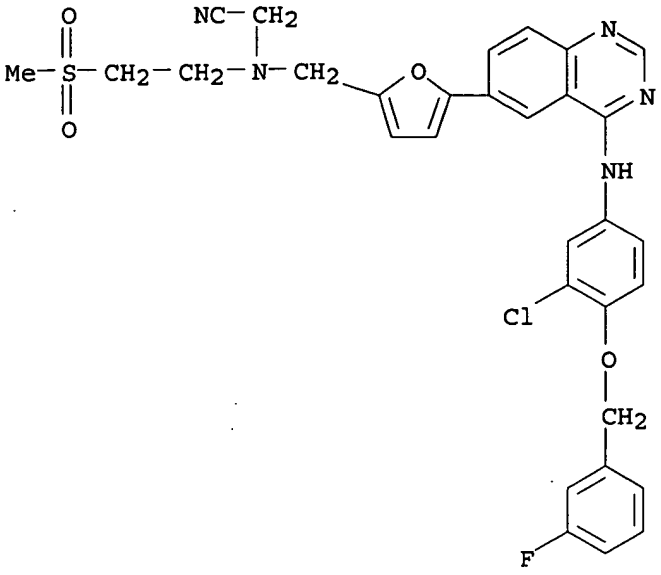
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[2-(methylsulfonyl)ethoxy]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



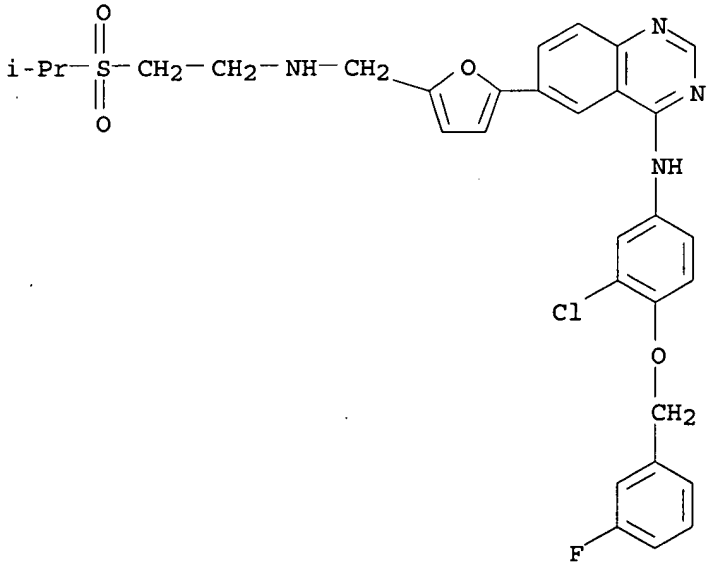
RN 319917-46-9 CAPLUS

CN Acetonitrile, [[[5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-

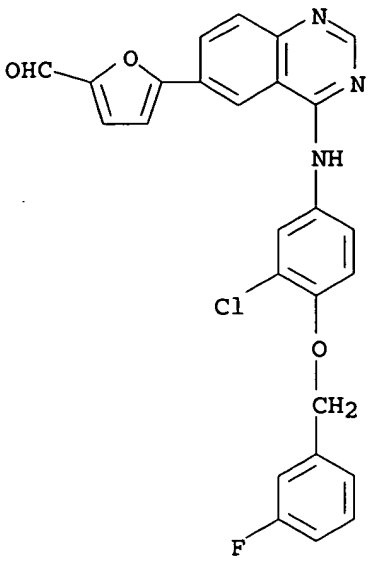
6-quinazolinyl]-2-furanyl]methyl][2-(methylsulfonyl)ethyl]amino]- (9CI) (CA INDEX NAME)



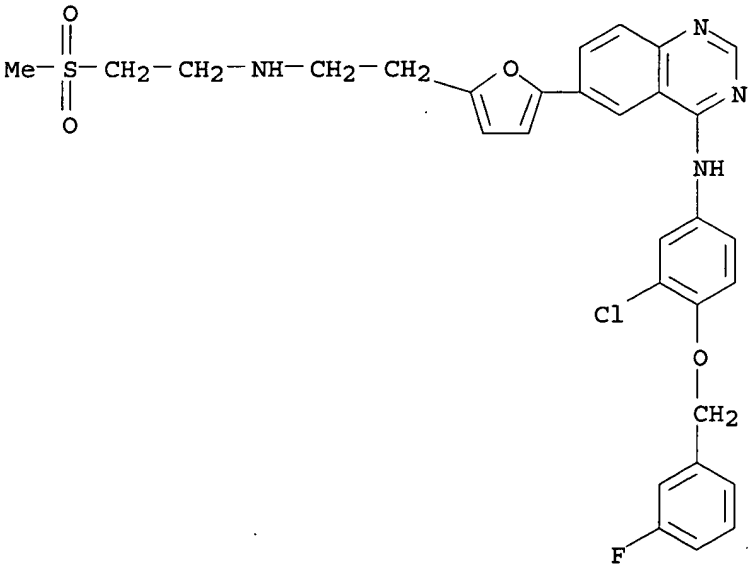
RN 320337-12-0 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-[(1-methylethyl)sulfonyl]ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



IT **231278-84-5 319917-43-6 320337-48-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(erb-family inhibitor and raf and/or ras inhibitor combination for cancer treatment)
RN 231278-84-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



RN 319917-43-6 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[2-[[2-(methylsulfonyl)ethyl]amino]ethyl]-2-furanyl]- (9CI) (CA INDEX NAME)



RN 320337-48-2 CAPLUS
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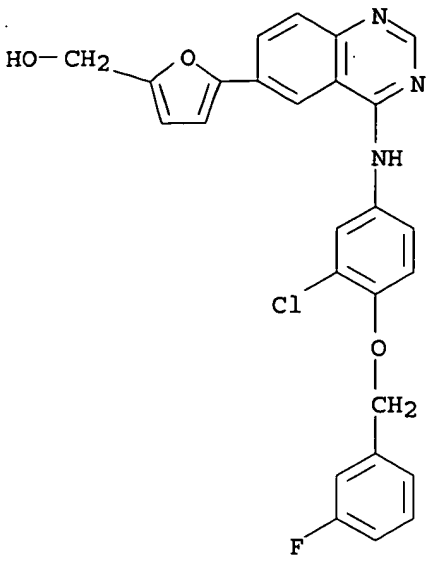
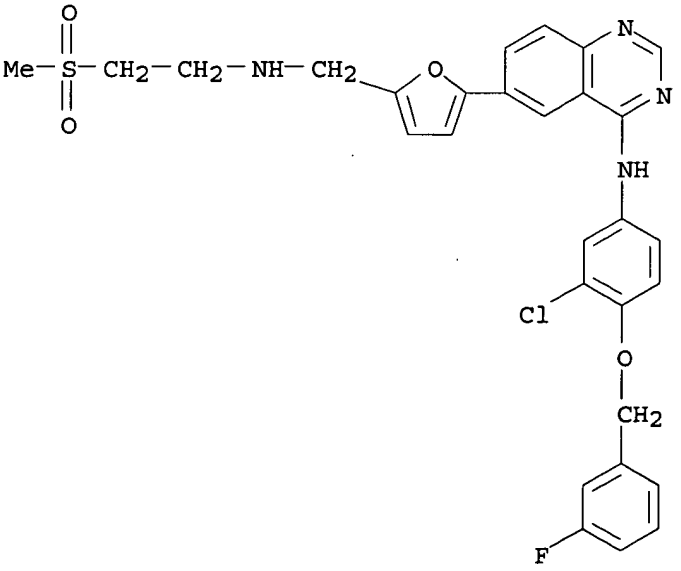


IT **231277-92-2P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(nod nherb-family inhibitor and raf and/or ras inhibitor combination for cancer treatment)
RN 231277-92-2 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:818866 CAPLUS
DOCUMENT NUMBER: 140:104

10/ 030,527

TITLE: Lapatinib ditosylate (GlaxoSmithKline
AUTHOR(S): Kim, Tracy E.; Murren, John R.
CORPORATE SOURCE: Beverly Hills, CA, 90211, USA
SOURCE: IDrugs (2003), 6(9), 886-893
CODEN: IDRUFN; ISSN: 1369-7056
PUBLISHER: Current Drugs
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. Lapatinib ditosylate, an ErbB-2 and EGFR dual tyrosine kinase inhibitor, is being developed by GlaxoSmithKline plc for the potential treatment of solid tumors.

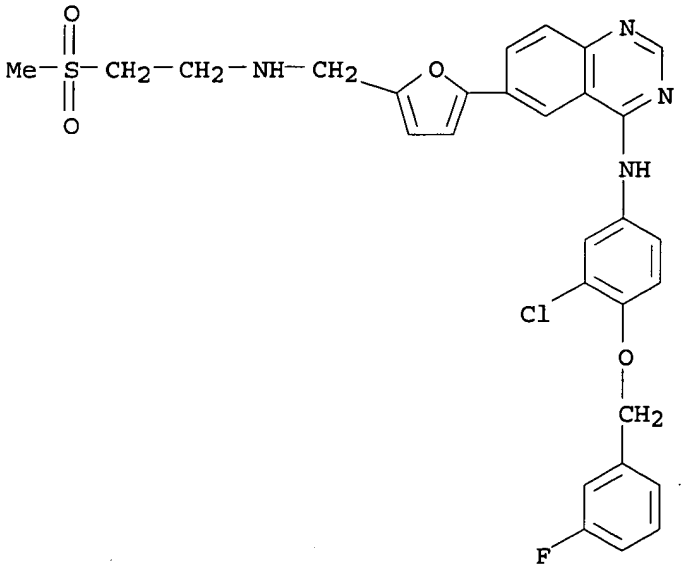
IT **388082-77-7**, Lapatinib ditosylate
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(lapatinib ditosylate for potential treatment of solid tumors)

RN 388082-77-7 CAPLUS

CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-, bis(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

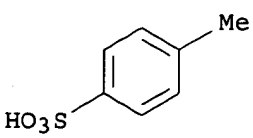
CM 1

CRN 231277-92-2
CMF C29 H26 Cl F N4 O4 S



CM 2

CRN 104-15-4
CMF C7 H8 O3 S



REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:719350 CAPLUS
DOCUMENT NUMBER: 139:239200
TITLE: Apparatus and method for separating and collecting particles
INVENTOR(S): Franklin, Michael Leon
PATENT ASSIGNEE(S): Glaxo Group Limited, UK
SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003074154	A1	20030912	WO 2003-US5645	20030226

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2002-360734P P 20020301

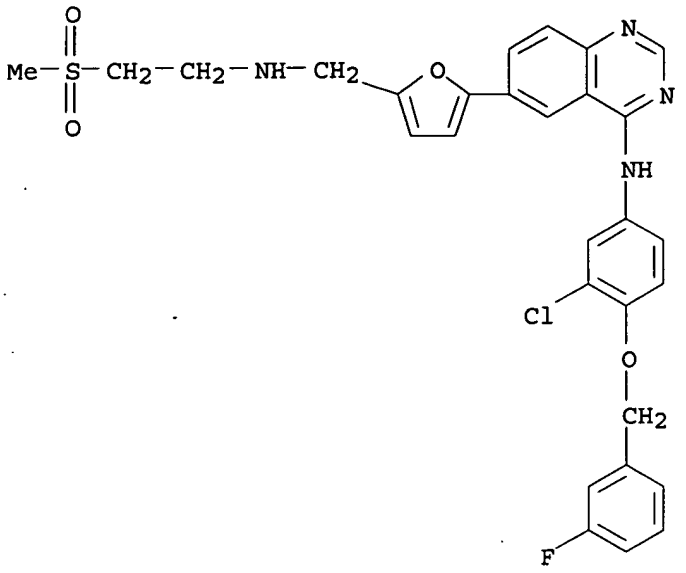
AB An app. for use in the sepn. and collection of particles comprises a base member including a particle collection surface, a lateral wall such as a cylinder disposed on the base member, and a cover member disposed on the lateral wall. The cover member, the lateral wall and the base member cooperatively define an enclosed particle settling-chamber. A particle sample holder is mounted within the particle settling-chamber at a distance above the particle collection surface. In use, a propellant ejection device having a propellant ejection outlet operatively directed toward the particle sample holder is used to deliver a metered quantity of propellant toward the particle sample holder to disperse particles within the chamber. The dispersed particles settle onto the particle collection surface, and the particle collection surface can then be removed from the app. for subsequent use in particle anal. procedures.

IT **388082-78-8**
RL: NUU (Other use, unclassified); USES (Uses)
(app. and method for sepg. and collecting particles)

RN 388082-78-8 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-, bis(4-methylbenzenesulfonate), monohydrate (9CI) (CA INDEX NAME)

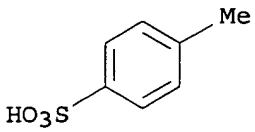
CM 1

CRN 231277-92-2
CMF C29 H26 Cl F N4 O4 S



CM 2

CRN 104-15-4
CMF C7 H8 O3 S



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:607455 CAPLUS
DOCUMENT NUMBER: 139:159940
TITLE: Use of tyrosine kinase inhibitors for treatment of pulmonary inflammatory conditions
INVENTOR(S): Jung, Birgit; Puschner, Hubert
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G., Germany
SOURCE: Ger. Offen., 24 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10204462	A1	20030807	DE 2002-10204462	20020205
WO 2003066060	A2	20030814	WO 2003-EP814	20030128

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,

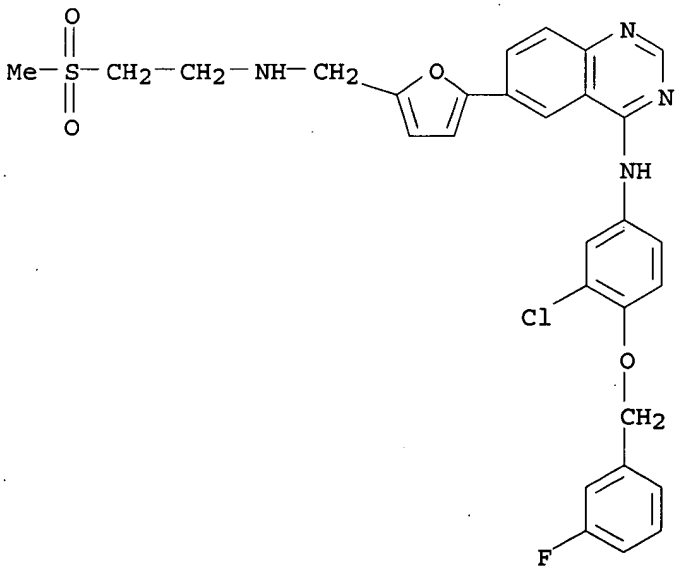
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003149062 A1 20030807 US 2003-353616 20030129
PRIORITY APPLN. INFO.: DE 2002-10204462 A 20020205
OTHER SOURCE(S): MARPAT 139:159940

AB The invention discloses the use of quinazoline derivs. (Markush included), or the compds. (1) 4-[(3-chloro-4-fluorphenyl)amino]-6-[(4-dimethylaminocyclohexyl)amino]pyrimido[5,4-d]pyrimidine; (2) 4-[(R)-(1-phenylethyl)amino]-6-(4-hydroxyphenyl)-7H-pyrrolo[2,3-d]pyrimidine; (3) 4-[(3-Chloro-4-(3-fluoro-4-benzyloxy)phenyl)amino]-6-[5-(((2-methansulfonylethyl)amino)methyl)-furan-2-yl]quinazoline; or the antibody cetuximab C225, trastuzumab, ABX-EGF, Mab ICR-62 and EGFR antisense, their tautomers, their stereoisomers and their salts, in particular their physiol. compatible salts with inorg. or org. acids or bases, for the prodn. of a medication for prevention or treatment of diseases of the respiratory system or the lung. Prepn. of quinazoline compds. is included.

IT **231277-92-2**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(tyrosine kinase inhibitors for treatment of pulmonary inflammatory conditions)

RN 231277-92-2 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



L3 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:532545 CAPLUS
DOCUMENT NUMBER: 139:95455
TITLE: Combined therapy against tumors comprising substituted acryloyl distamycin derivatives and protein kinase (serine/threonine kinase) inhibitors
INVENTOR(S): Geroni, Maria Cristina; Fowst, Camilla; Cozzi, Paolo

10/ 030,527

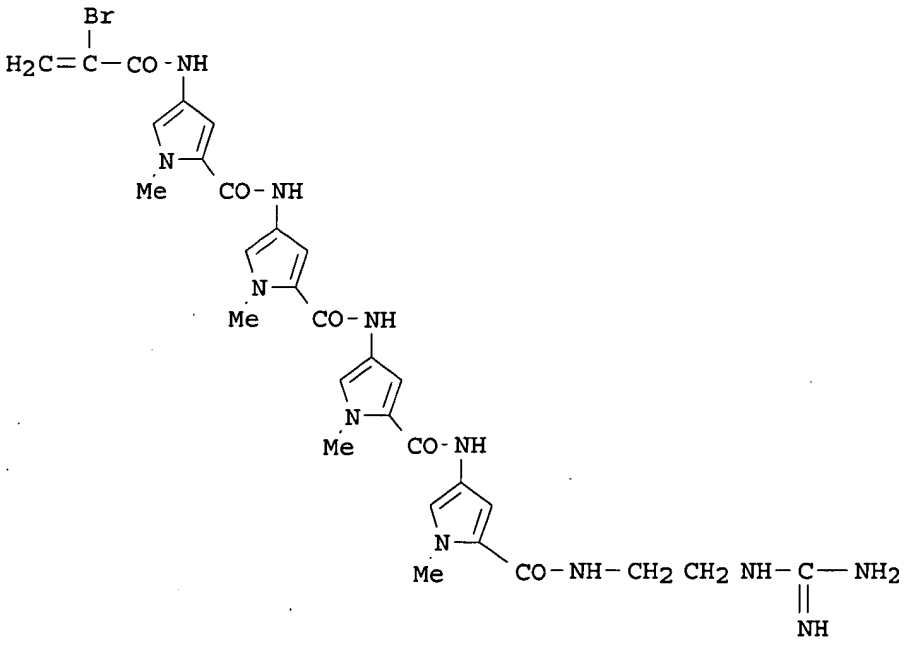
PATENT ASSIGNEE(S): Pharmacia Italia SpA, Italy
SOURCE: PCT Int. Appl., 25 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003055522	A1	20030710	WO 2002-EP13092	20021218

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: EP 2002-75052 A 20020102
OTHER SOURCE(S): MARPAT 139:95455
GI



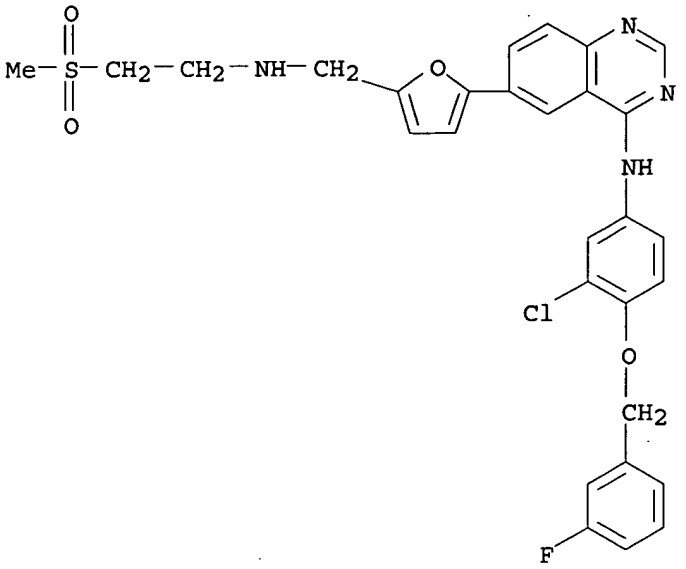
AB The present invention provides the combined use of acryloyl distamycin derivs., in particular .alpha.-bromo- and .alpha.-chloro-acryloyl distamycin derivs., and a protein kinase (serine/threonine and tyrosine kinases) inhibitor, in the treatment of tumors. Also provided is the use of the said combinations in the treatment or prevention of metastasis or in the treatment of tumors by inhibition of angiogenesis. An example protein kinase inhibitor is STI 571 and a distamycin deriv. is brostallicin (I).

IT **231277-92-2**, GW572016
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(combined antitumor therapy comprising acryloyl distamycin derivs. and protein kinase (serine/threonine kinase) inhibitors)

RN 231277-92-2 CAPLUS

CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2003:8967 CAPLUS

DOCUMENT NUMBER: 139:62338

TITLE: Small molecule tyrosine kinase inhibitors: clinical development of anticancer agents

AUTHOR(S): Laird, A. Douglas; Cherrington, Julie M.

CORPORATE SOURCE: SUGEN, Inc., South San Francisco, CA, 94080, USA

SOURCE: Expert Opinion on Investigational Drugs (2003), 12(1), 51-64
CODEN: EOIDER; ISSN: 1354-3784

PUBLISHER: Ashley Publications Ltd.

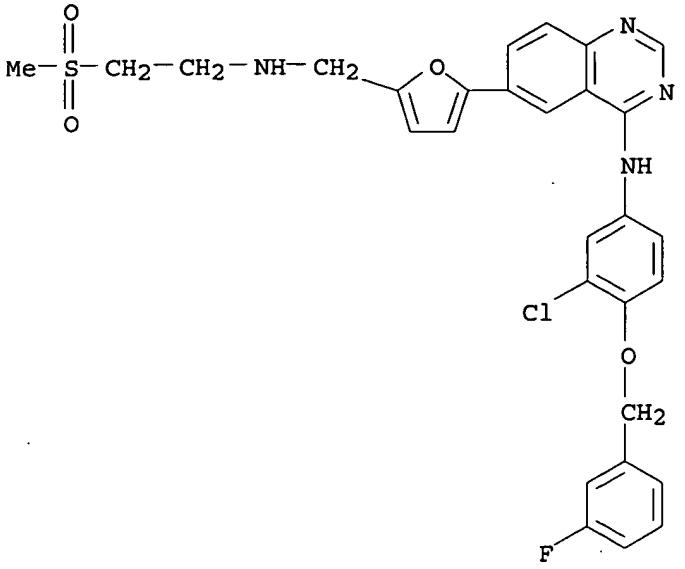
DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. Numerous small mol. synthetic tyrosine kinase inhibitors are in clin. development for the treatment of human cancers. These fall into three broad categories: inhibitors of the epidermal growth factor receptor tyrosine kinase family (e.g., Iressa and Tarceva), inhibitors of the split kinase domain receptor tyrosine kinase subgroup (e.g., PTK787/ZK 222584 and SU11248) and inhibitors of tyrosine kinases from multiple subgroups (e.g., Gleevec). In addn., agents targeting other tyrosine kinases implicated in cancer, such as Met, Tie-2 and Src, are in preclin. development. As experience is gained in the clinic, it has become clear that unleashing the full therapeutic potential of tyrosine kinase inhibitors will require patient preselection, better assays to guide dose selection, knowledge of mechanism-based side effects and ways to predict and overcome drug resistance.

IT **231277-92-2**, GW-572016
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(small mol. tyrosine kinase inhibitors and clin. development of

anticancer agents)
RN 231277-92-2 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 127 THERE ARE 127 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

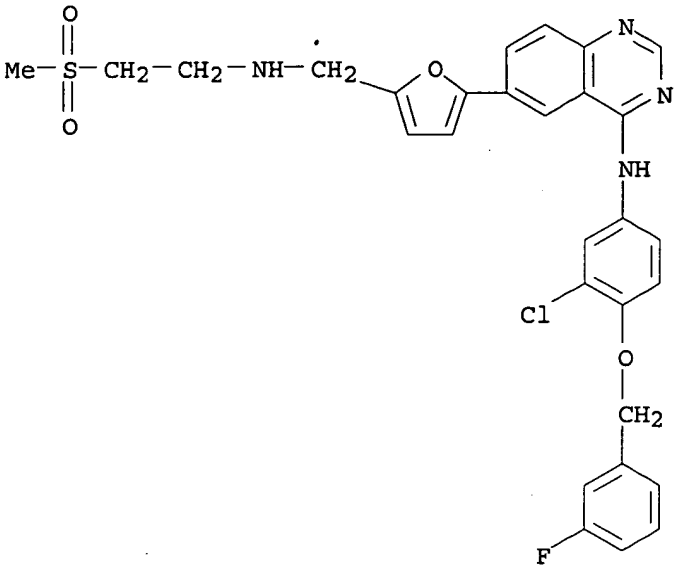
L3 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:668812 CAPLUS
DOCUMENT NUMBER: 138:280796
TITLE: Anti-tumor activity of GW572016: a dual tyrosine kinase inhibitor blocks EGF activation of EGFR/erbB2 and downstream Erk1/2 and AKT pathways
AUTHOR(S): Xia, Wenle; Mullin, Robert J.; Keith, Barry R.; Liu, Lei-Hua; Ma, Hong; Rusnak, David W.; Owens, Gary; Alligood, Krystal J.; Spector, Neil L.
CORPORATE SOURCE: GlaxoSmithKline, Department of Discovery Medicine, Research Triangle Park, North Carolina, NC, 27709-3398, USA
SOURCE: Oncogene (2002), 21(41), 6255-6263
CODEN: ONCNES; ISSN: 0950-9232
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Dual EGFR/erbB2 inhibition is an attractive therapeutic strategy for epithelial tumors, as ligand-induced erbB2/EGFR heterodimerization triggers potent proliferative and survival signals. Here we show that a small mol., GW572016, potently inhibits both EGFR and erbB2 tyrosine kinases leading to growth arrest and/or apoptosis in EGFR and erbB2-dependent tumor cell lines. GW572016 markedly reduced tyrosine phosphorylation of EGFR and erbB2, and inhibited activation of Erk1/2 and AKT, downstream effectors of proliferation and cell survival, resp. Complete inhibition of activated AKT in erbB2 overexpressing cells correlated with a 23-fold increase in apoptosis compared with vehicle controls. EGF, often elevated in cancer patients, did not reverse the inhibitory effects of GW572016. These observations were reproduced in vivo, where GW572016 treatment inhibited activation of EGFR, erbB2, Erk1/2

and AKT in human tumor xenografts. Erk1/2 and AKT represent potential biomarkers to assess the clin. activity of GW572016. Inhibition of activated AKT in EGFR or erbB2-dependent tumors by GW572016 may lead to tumor regressions when used as a monotherapy, or may enhance the anti-tumor activity of chemotherapeutics, since constitutive activation of AKT has been linked to chemo-resistance.

IT **231277-92-2**, GW 572016
RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(GW572016 antitumor activity: dual tyrosine kinase inhibitor blocks EGF activation of EGFR/erbB2 and downstream Erk1/2 and AKT pathways)

RN 231277-92-2 CAPLUS

CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:555376 CAPLUS

DOCUMENT NUMBER: 137:119644

TITLE: 4-Quinazolineamine derivative combination with other antineoplastic agent for cancer treatment, and compound preparation.

INVENTOR(S): Lackey, Karen Elizabeth; Spector, Neil; Wood, Edgar Raymond, III; Xia, Wenle

PATENT ASSIGNEE(S): Glaxo Group Limited, UK

SOURCE: PCT Int. Appl., 57 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002056912	A2	20020725	WO 2002-US1130	20020114
WO 2002056912	A3	20030522		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1353693 A2 20031022 EP 2002-703127 20020114

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

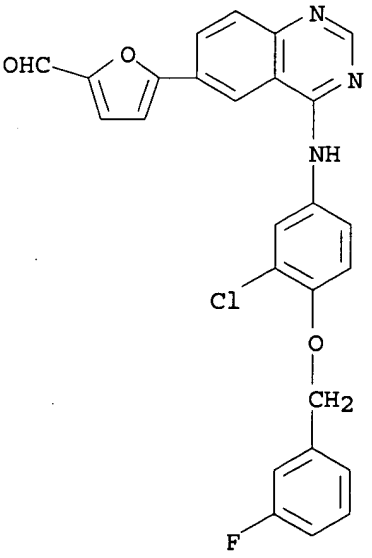
PRIORITY APPLN. INFO.: US 2001-262402P P 20010116
WO 2002-US1130 W 20020114

OTHER SOURCE(S): MARPAT 137:119644

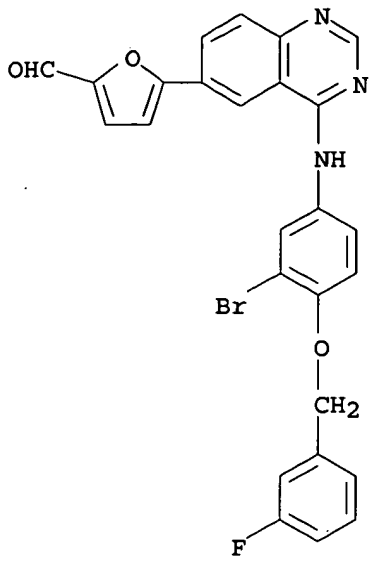
AB A method of treating cancer is described which includes administration of a 4-quinazolineamine (prepn. included) and at least one other antineoplastic agent. Also described is a pharmaceutical combination including the 4-quinazolineamines.

IT **231278-84-5P 320337-27-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction; quinazolineamine deriv. combination with other antineoplastic agent for cancer treatment, and compd. prepn.)

RN 231278-84-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



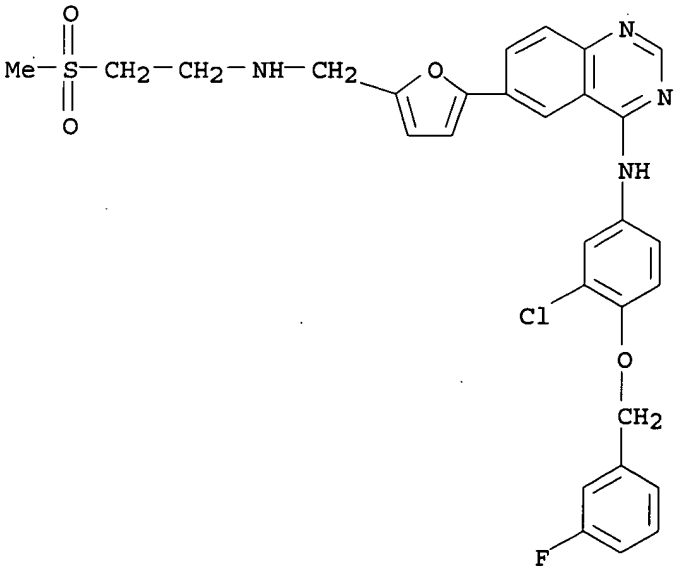
RN 320337-27-7 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-bromo-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



IT **231277-92-2P 388082-75-5P 388082-77-7P**
388082-78-8P 443883-05-4P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(quinazolineamine deriv. combination with other antineoplastic agent for cancer treatment, and compd. prepn.)

RN 231277-92-2 CAPLUS

CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



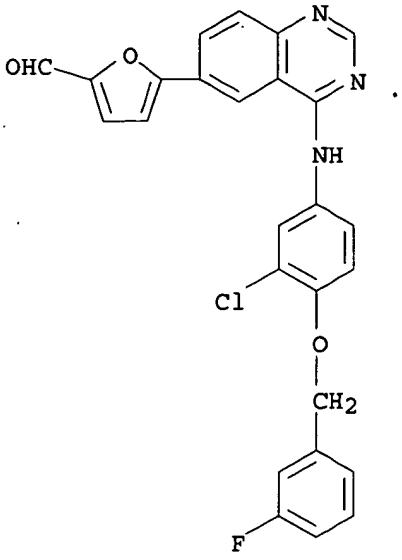
RN 388082-75-5 CAPLUS

CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

10/ 030,527

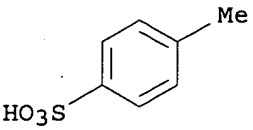
CM 1

CRN 231278-84-5
CMF C26 H17 Cl F N3 O3



CM 2

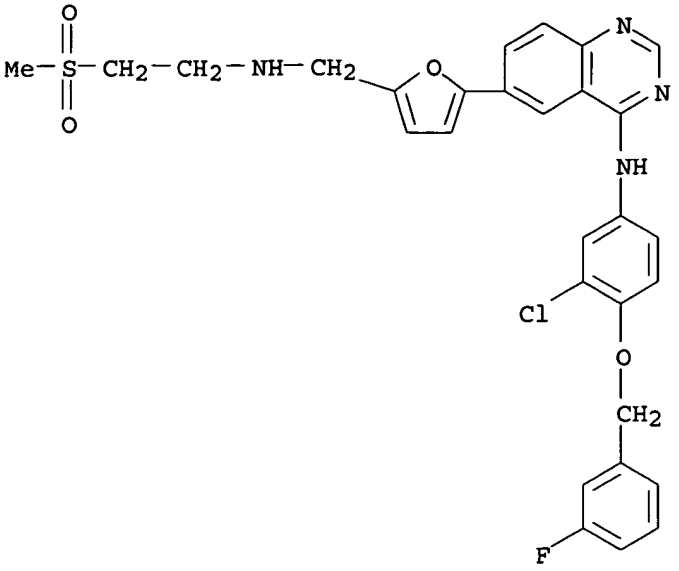
CRN 104-15-4
CMF C7 H8 O3 S



RN 388082-77-7 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-, bis(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

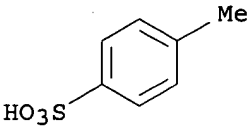
CM 1

CRN 231277-92-2
CMF C29 H26 Cl F N4 O4 S



CM 2

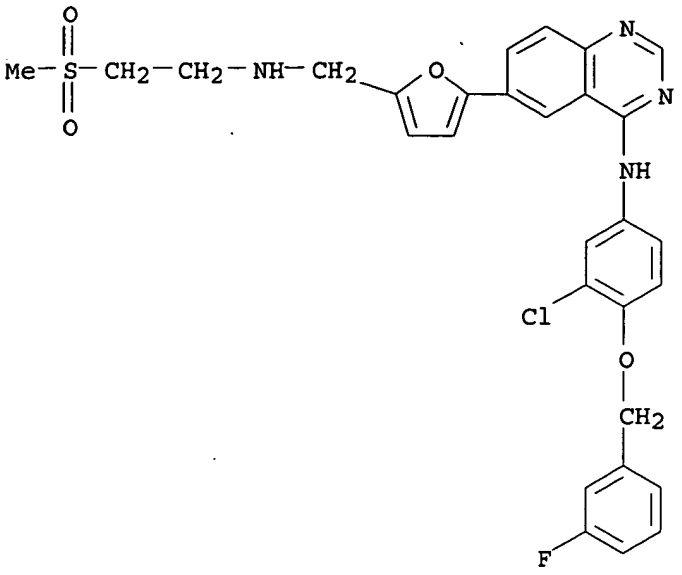
CRN 104-15-4
CMF C7 H8 O3 S



RN 388082-78-8 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-, bis(4-methylbenzenesulfonate), monohydrate (9CI) (CA INDEX NAME)

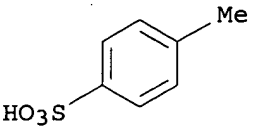
CM 1

CRN 231277-92-2
CMF C29 H26 Cl F N4 O4 S



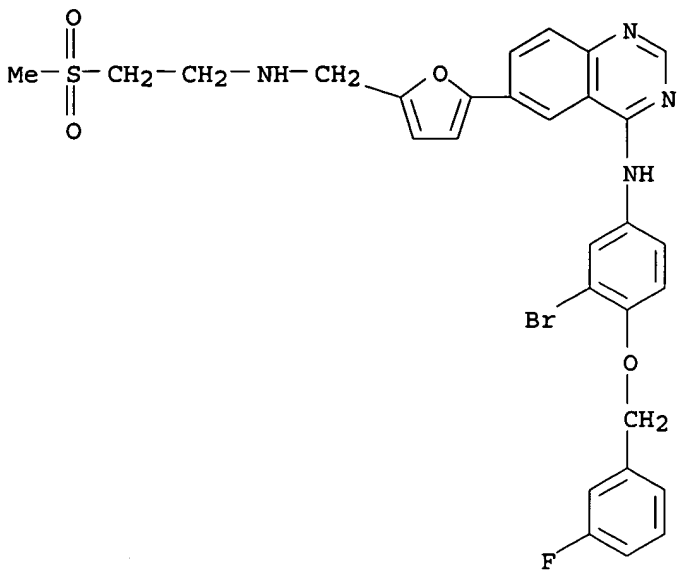
CM 2

CRN 104-15-4
CMF C7 H8 O3 S



RN 443883-05-4 CAPLUS
CN 4-Quinazolinamine, N-[3-bromo-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-, dihydrochloride (9CI) (CA INDEX NAME)

PAGE 1-A



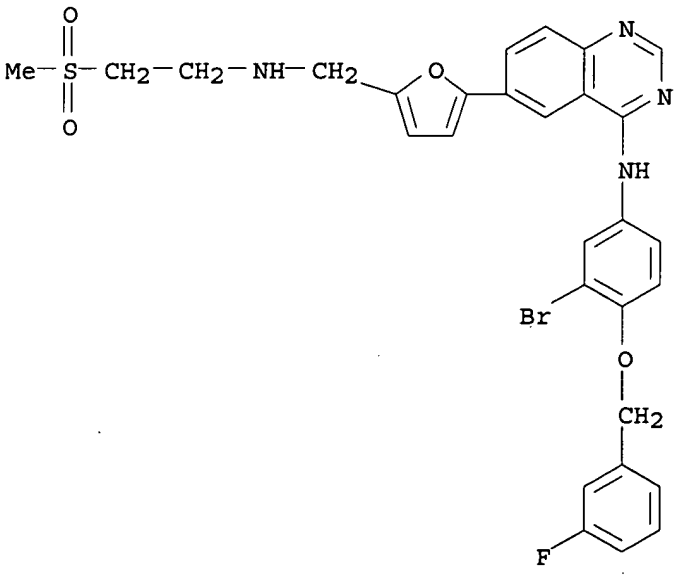
PAGE 2-A

●2 HCl

IT **388082-79-9**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(quinazolineamine deriv. combination with other antineoplastic agent for cancer treatment, and compd. prepn.)

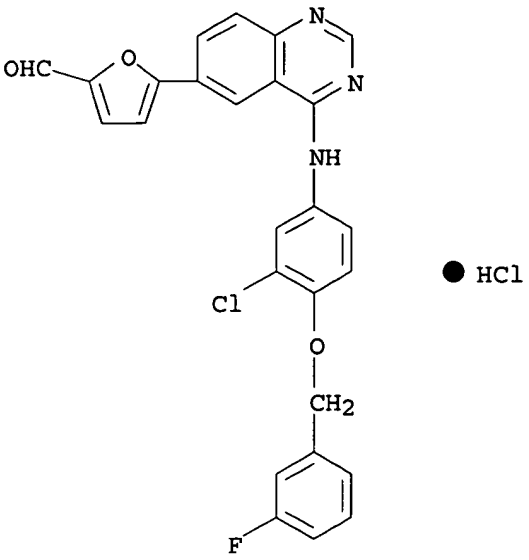
RN 388082-79-9 CAPLUS

CN 4-Quinazolinamine, N-[3-bromo-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)

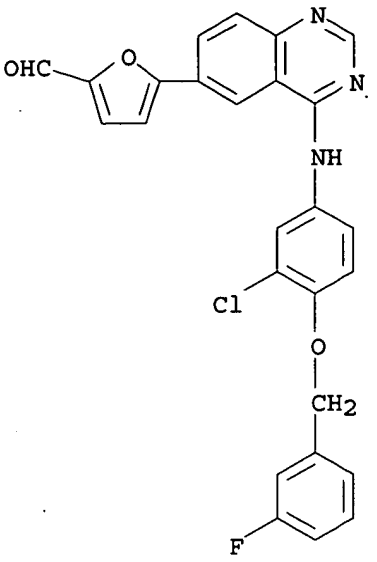


10/ 030,527

IT **388082-76-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; quinazolineamine deriv. combination with other antineoplastic agent for cancer treatment, and compd. prepn.)
RN 388082-76-6 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



L3 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:117136 CAPLUS
DOCUMENT NUMBER: 137:125053
TITLE: Use of lithium N,O-dimethylhydroxylamide as an efficient in situ protecting agent for aromatic aldehydes
AUTHOR(S): Roschangar, Frank; Brown, Jennifer C.; Cooley, Bobby E.; Sharp, Matthew J.; Matsuoka, Richard T.
CORPORATE SOURCE: GlaxoSmithKline, Chemical Development--Synthetic Chemistry, Research Triangle Park, NC, 27709, USA
SOURCE: Tetrahedron (2002), 58(9), 1657-1666
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:125053
AB Lithium N,O-dimethylhydroxylamide was effectively used as an alternative in situ protecting agent with low ortho-directing properties for aryl and heteroaryl aldehydes RCHO (R = Ph, 2,5-F(Br)C6H3, 2-furyl). The procedure was successfully applied to two practical multi-step one-pot syntheses of developmental drug candidate intermediates. Aldehyde protecting and ortho-directing properties of other lithium dialkylamides, such as diethylamide, morpholide, etc., were also evaluated.
IT **231278-84-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of substituted (quinazolinyl)furaldehyde by Suzuki coupling of iodoquinazoline deriv. with (formyl)furylboronic acid, prepd. from lithium alkylamide protected furaldehyde)
RN 231278-84-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

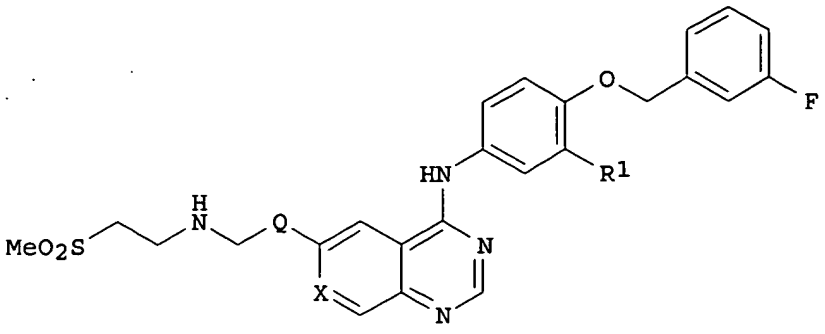
L3 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:31441 CAPLUS
DOCUMENT NUMBER: 136:102396
TITLE: Preparation of quinazoline ditosylate salts as inhibitors of erbB protein tyrosine kinases.
INVENTOR(S): McClure, Michael Scott; Osterhout, Martin Howard; Roschangar, Frank; Sacchetti, Mark Joseph
PATENT ASSIGNEE(S): Glaxo Group Limited, UK
SOURCE: PCT Int. Appl., 68 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002002552	A1	20020110	WO 2001-US20706	20010628
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1294715	A1	20030326	EP 2001-952304	20010628
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001011947	A	20030506	BR 2001-11947	20010628
NO 2002006196	A	20030224	NO 2002-6196	20021223
US 2003220354	A1	20031127	US 2003-311678	20030331

PRIORITY APPLN. INFO.:
US 2000-215508P P 20000630
US 2001-271845P P 20010227
WO 2001-US20706 W 20010628

10/ 030,527

OTHER SOURCE(S): MARPAT 136:102396
GI

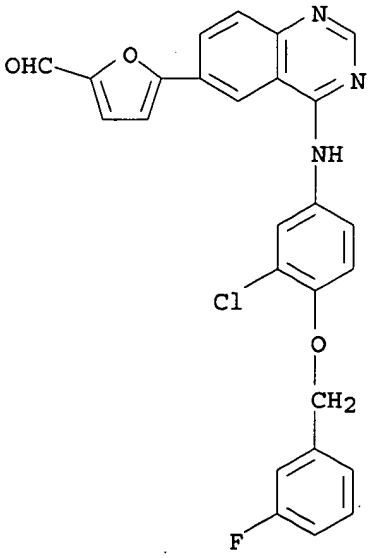


I

AB Title compds. (I; R1 = Cl, Br; X = CH, N, CF; Q = thiazolylene, furylene), were prepd. Thus, 5-[4-[3-chloro-4-(3-fluorobenzyloxy)anilino]-6-quinazolinyl]furan-2-carboxaldehyde 4-methylbenzenesulfonate (prepn. given), diisopropylethylamine, and 2-(methylsulfone)ethylamine were stirred 1 h in THF/IPA; he preformed imine/THF soln. was transferred to a stirred suspension of NaBH(OAc)3 in THF. After 90 min, aq. NaOH was added followed by sepn. of the aq. layer treatment of the org. layer with 4-MeC6H4SO3H to give 88% N-[3-chloro-4-[(3-fluorobenzyl)oxy]phenyl]-6-[5-[[2-(methanesulfonyl)ethyl]amino]methyl]-2-furyl-4-quinazolinamine ditosylate. This inhibited EGFr and ErbB2 at <0.10 .mu.M.

IT **231278-84-5P 388082-75-5P 388082-76-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; prepn. of quinazoline ditosylate salts as inhibitors of erbB protein tyrosine kinases)

RN 231278-84-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



RN 388082-75-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]a

mino]-6-quinazolinyl]-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

CM 1

CRN 231278-84-5
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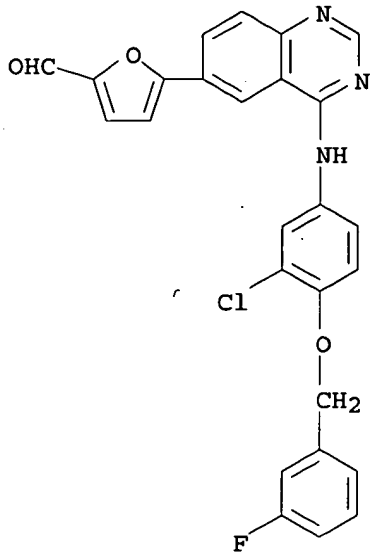
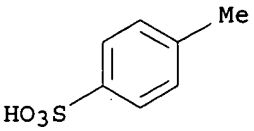
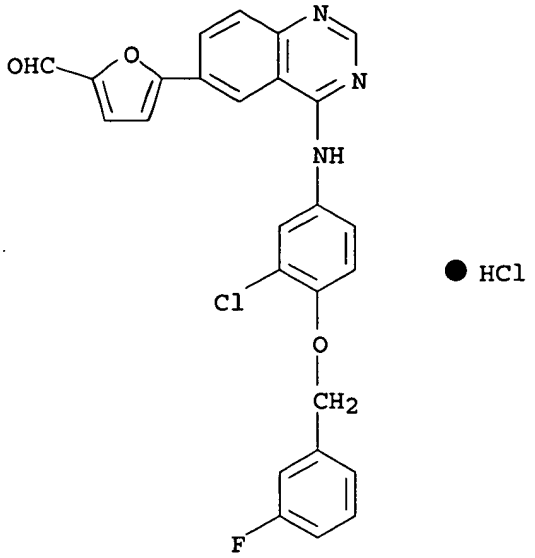


CM 2

CRN 104-15-4
CMF C7 H8 O3 S



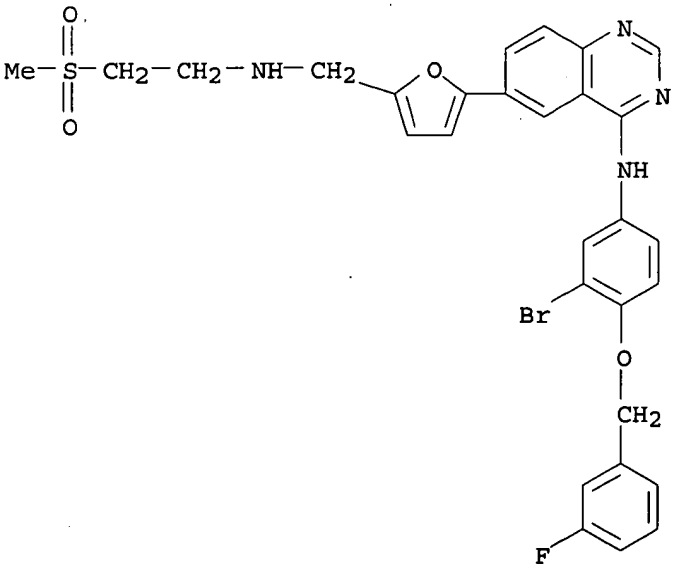
RN 388082-76-6 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



IT **388082-80-2P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of quinazoline ditosylate salts as inhibitors of erbB protein tyrosine kinases)
RN 388082-80-2 CAPLUS
CN 4-Quinazolinamine, N-[3-bromo-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-, bis(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

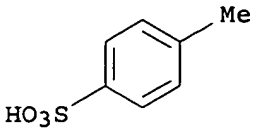
CM 1

CRN 388082-79-9
CMF C29 H26 Br F N4 O4 S



CM 2

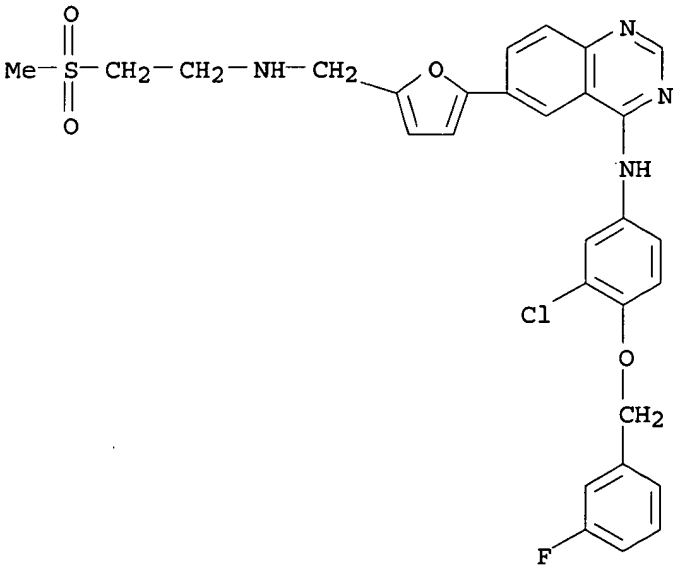
CRN 104-15-4
CMF C7 H8 O3 S



IT **388082-77-7P**
RL: PAC (Pharmacological activity); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(x-ray diffraction; prepn. of quinazoline ditosylate salts as inhibitors of erbB protein tyrosine kinases)
RN 388082-77-7 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-, bis(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

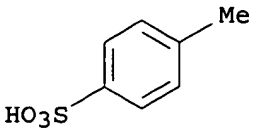
CM 1

CRN 231277-92-2
CMF C29 H26 Cl F N4 O4 S



CM 2

CRN 104-15-4
CMF C7 H8 O3 S



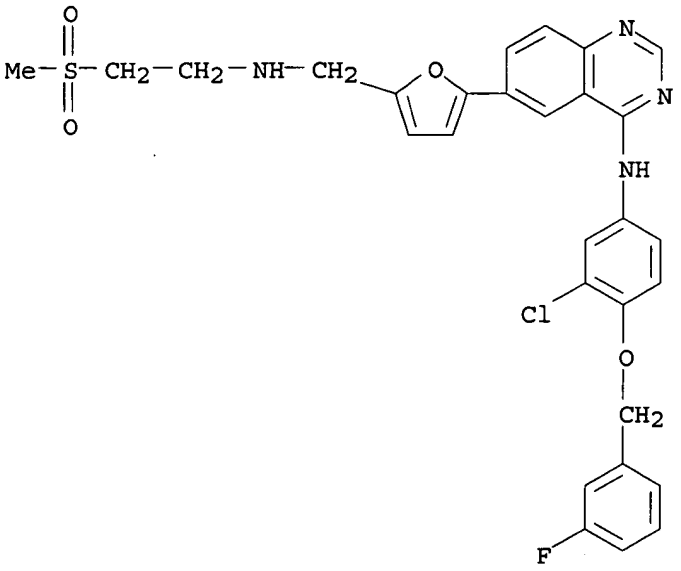
IT **388082-78-8P**
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(x-ray diffraction; prepn. of quinazoline ditosylate salts as inhibitors of erbB protein tyrosine kinases)

RN 388082-78-8 CAPLUS

CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-, bis(4-methylbenzenesulfonate), monohydrate (9CI) (CA INDEX NAME)

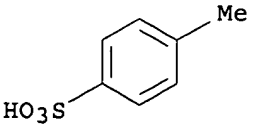
CM 1

CRN 231277-92-2
CMF C29 H26 Cl F N4 O4 S



CM 2

CRN 104-15-4
CMF C7 H8 O3 S



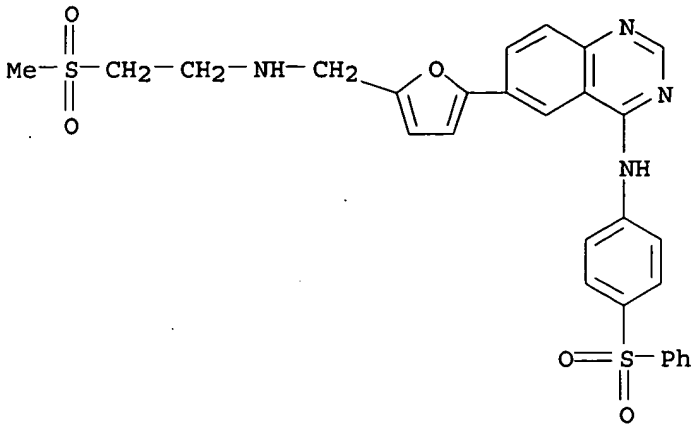
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:743253 CAPLUS
DOCUMENT NUMBER: 136:79264
TITLE: The characterization of novel, dual ErbB-2/EGFR, tyrosine kinase inhibitors: potential therapy for cancer
AUTHOR(S): Rusnak, David W.; Affleck, Karen; Cockerill, Stuart G.; Stubberfield, Colin; Harris, Robert; Page, Martin; Smith, Kathryn J.; Guntrip, Stephen B.; Carter, Malcolm C.; Shaw, Robert J.; Jowett, Amanda; Stables, Jeremy; Topley, Peter; Wood, Edgar R.; Brignola, Perry S.; Kadwell, Sue H.; Reep, Bryan R.; Mullin, Robert J.; Alligood, Krystal J.; Keith, Barry R.; Crosby, Renae M.; Murray, Doris M.; Knight, W. Blaine; Gilmer, Tona M.; Lackey, Karen
CORPORATE SOURCE: Department of Cancer Biology, GlaxoSmithKline, Research Triangle Park, NC, 27709, USA
SOURCE: Cancer Research (2001), 61(19), 7196-7203
CODEN: CNREA8; ISSN: 0008-5472
PUBLISHER: American Association for Cancer Research
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The type 1 receptor tyrosine kinases constitute a family of transmembrane proteins involved in various aspects of cell growth and survival and have been implicated in the initiation and progression of several types of human malignancies. The best characterized of these proteins are the epidermal growth factor receptor (EGFR) and ErbB-2 (HER-2/neu). We have developed potent quinazoline and pyrido-[3,4-d]-pyrimidine small mols. that are dual inhibitors of ErbB-2 and EGFR. The compds. demonstrate potent in vitro inhibition of the ErbB-2 and EGFR kinase domains with IC50s <80 nM. Growth of ErbB-2- and EGFR-expressing tumor cell lines is inhibited at concns. <0.5 .mu.M. Selectivity for tumor cell growth inhibition vs. normal human fibroblast growth inhibition ranges from 10- to >75-fold. Tumor growth in mouse s.c. xenograft models of the BT474 and HN5 cell lines is inhibited in a dose-responsive manner using oral doses of 10 and 30 mg/kg twice per day. In addn., the tested compds. caused a redn. of ErbB-2 and EGFR autophosphorylation in tumor fragments from these xenograft models. These data indicate that these compds. have potential use as therapy in the broad population of cancer patients overexpressing ErbB-2 and/or EGFR.

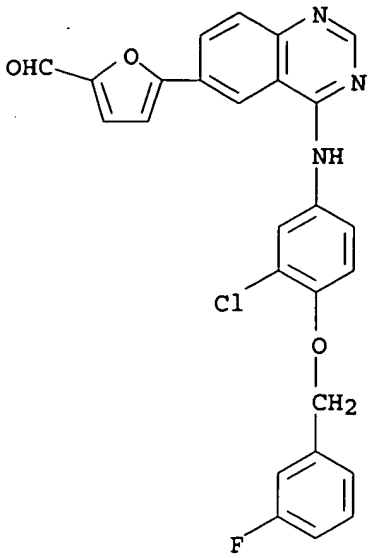
IT **386744-56-5**, GW 9525
RL: PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(characterization of novel, dual ErbB-2/EGFR, tyrosine kinase inhibitors and potential therapy for cancer)

RN 386744-56-5 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:669418 CAPLUS
DOCUMENT NUMBER: 136:19979
TITLE: A practical one-pot synthesis of 5-aryl-2-furaldehydes
AUTHOR(S): McClure, Michael S.; Roschangar, Frank; Hodson, Stephen J.; Millar, Alan; Osterhout, Martin H.
CORPORATE SOURCE: Chemical Development - Synthetic Chemistry, GlaxoSmithKline, Research Triangle Park, NC, 27709, USA
SOURCE: Synthesis (2001), (11), 1681-1685
CODEN: SYNTBF; ISSN: 0039-7881
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:19979
AB A useful 1-pot synthesis of 5-aryl-2-furaldehydes via Pd-mediated Suzuki coupling of aryl halides with in situ generated 5-(diethoxymethyl)-2-furylboronic acid is described. The procedure has general applicability, delivers high yields, and is amenable to scale-up.
IT **231278-84-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of arylfuraldehydes by Suzuki coupling of aryl halides with furylboronic acids)
RN 231278-84-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:50639 CAPLUS
DOCUMENT NUMBER: 134:100886
TITLE: Preparation of anilinoquinazolines as protein tyrosine kinase inhibitors
INVENTOR(S): Cockerill, George Stuart; Lackey, Karen Elizabeth
PATENT ASSIGNEE(S): Glaxo Group Limited, UK
SOURCE: PCT Int. Appl., 152 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001004111	A1	20010118	WO 2000-US18128	20000630
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1192151	A1	20020403	EP 2000-943348	20000630
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2003504363	T2	20030204	JP 2001-509721	20000630

PRIORITY APPLN. INFO.: GB 1999-16213 A 19990709
GB 1999-16218 A 19990709
WO 2000-US18128 W 20000630
OTHER SOURCE(S): MARPAT 134:100886
GI

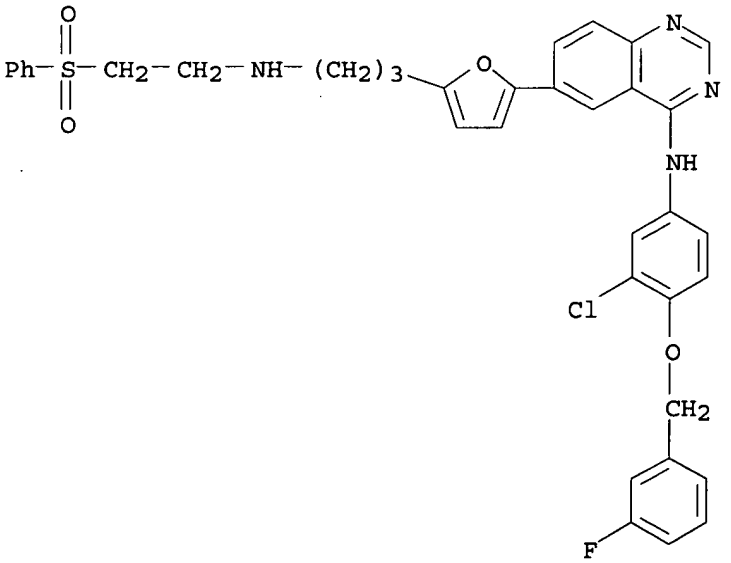
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compds. [I; X = CR1 and Y = N; or X = N and Y = CR1; X = CR1 and Y = CR2; X = CR2 and Y = CR1; R1 = Ar(CH2)pZCH2CH2SO2R5 (wherein Ar = (un)substituted Ph, furan, thiophene, etc.; Z = O, S, NH, NR6; p = 1-4; R5 = alkyl substituted by 5-10 membered heterocyclic group, 3-10 membered carbocyclic group, etc.; R6 = alkyl, alkoxyalkyl, hydroxyalkyl, etc.); R2 = H, halo, OH, etc.; R3 = pyridylmethoxy, benzyloxy, halo-, dihalo- and trihalobenzyloxy; R4 = H, halo, alkyl, etc.; with the proviso that when p = 1 and Z = NH, R5 cannot represent Me] which exhibit protein tyrosine kinase inhibition, in particular erbB family kinase inhibition, and useful in treating cancer and psoriasis, were prepd. E.g., a multi-step synthesis of the anilinoquinazoline II was given. Biol. data (erbB-2, erbB-4, EGFr, and cell proliferation inhibition) for the compds. I were presented.

IT **319917-32-3P 319917-33-4P 319917-34-5P**
319917-35-6P 319917-36-7P 319917-38-9P
319917-39-0P 319917-40-3P 319917-41-4P
319917-43-6P 319917-44-7P 319917-45-8P
319917-46-9P 320337-09-5P 320337-10-8P
320337-11-9P 320337-12-0P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of anilinoquinazolines as protein tyrosine kinase inhibitors)

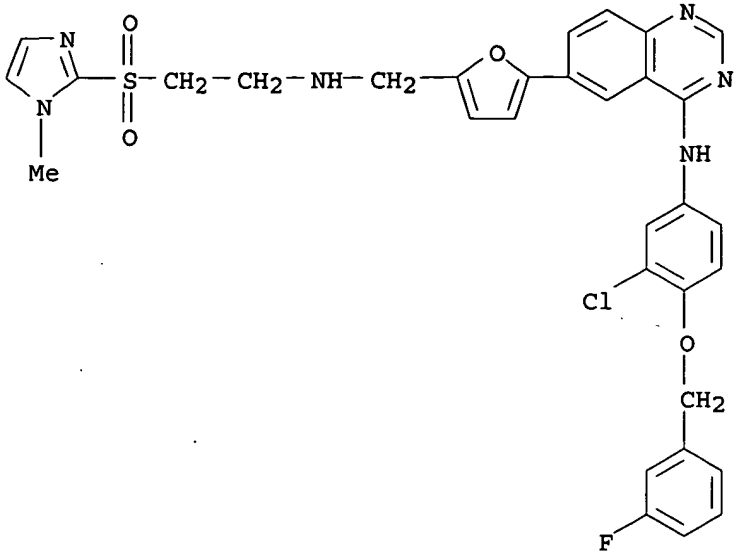
RN 319917-32-3 CAPLUS

CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[3-[[2-(phenylsulfonyl)ethyl]amino]propyl]-2-furanyl]- (9CI) (CA INDEX NAME)

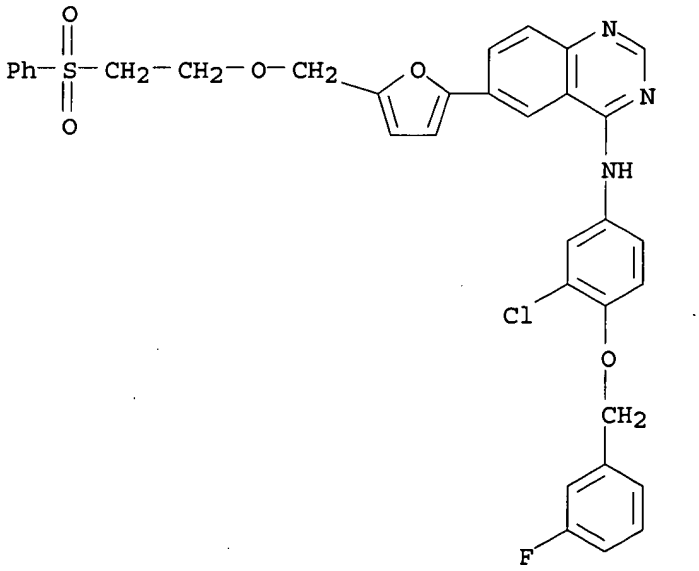


RN 319917-33-4 CAPLUS

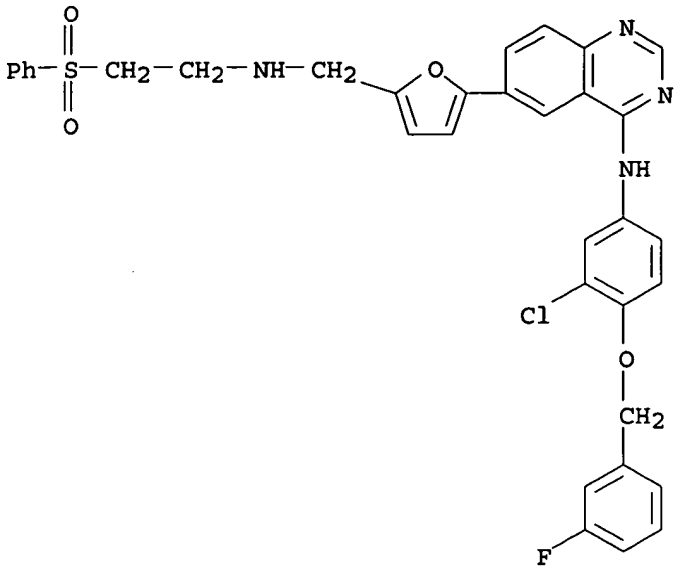
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-[(1-methyl-1H-imidazol-2-yl)sulfonyl]ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



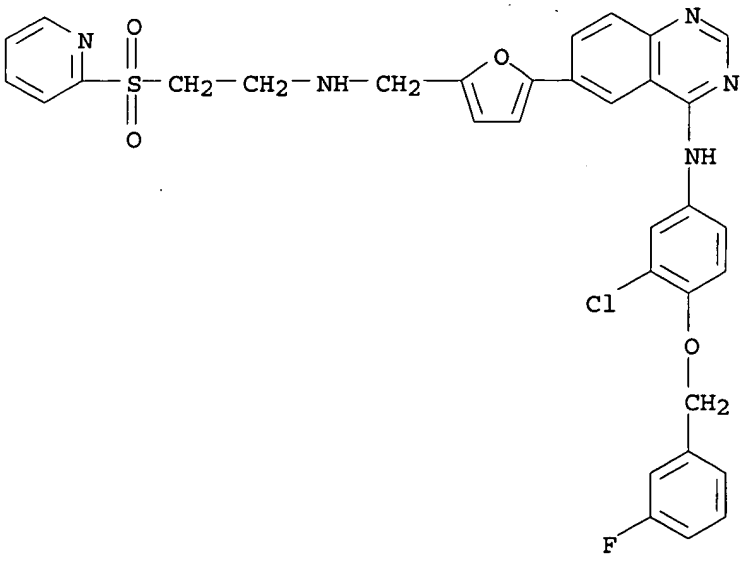
RN 319917-34-5 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[2-(phenylsulfonyl)ethoxy]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



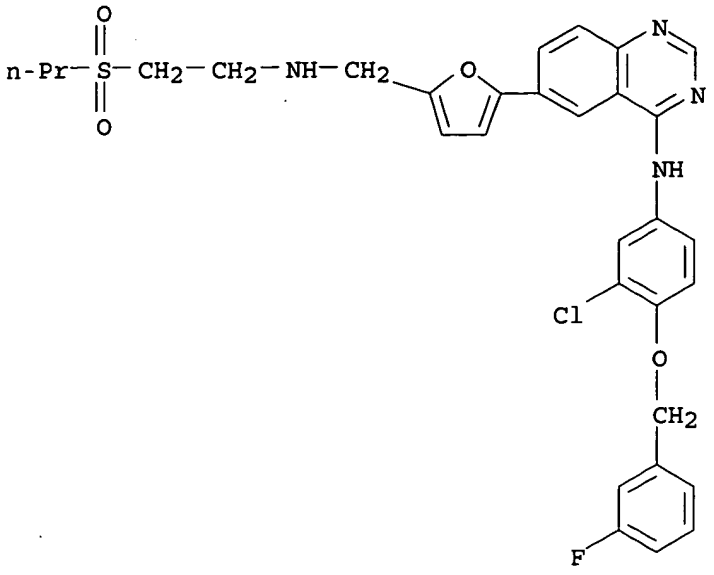
RN 319917-35-6 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(phenylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



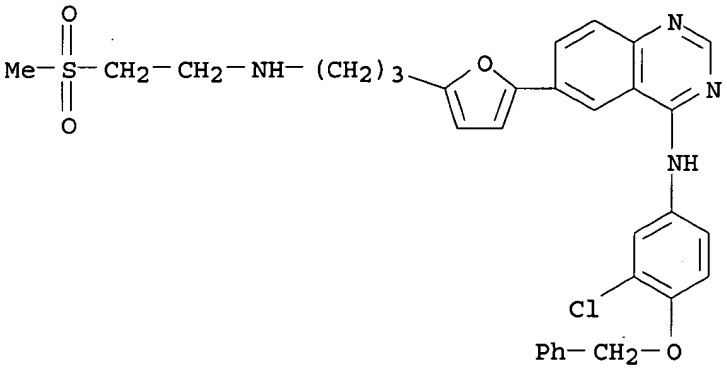
RN 319917-36-7 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(2-pyridinylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



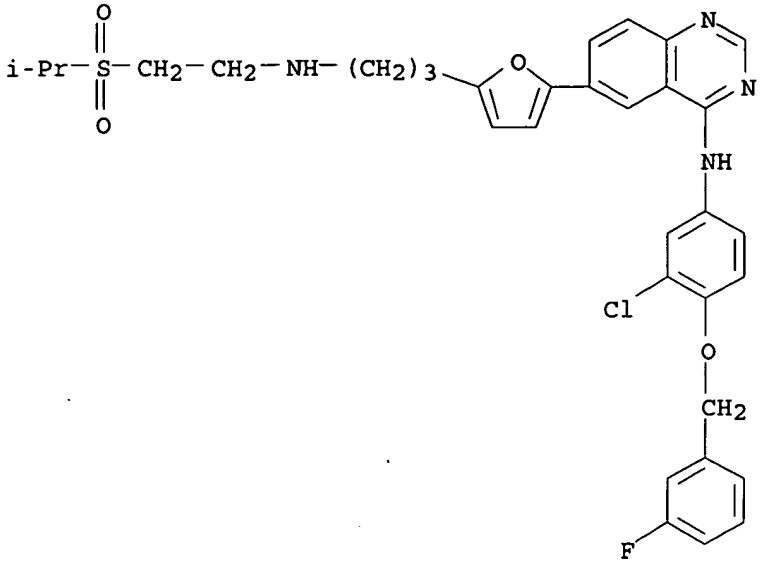
RN 319917-38-9 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(propylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



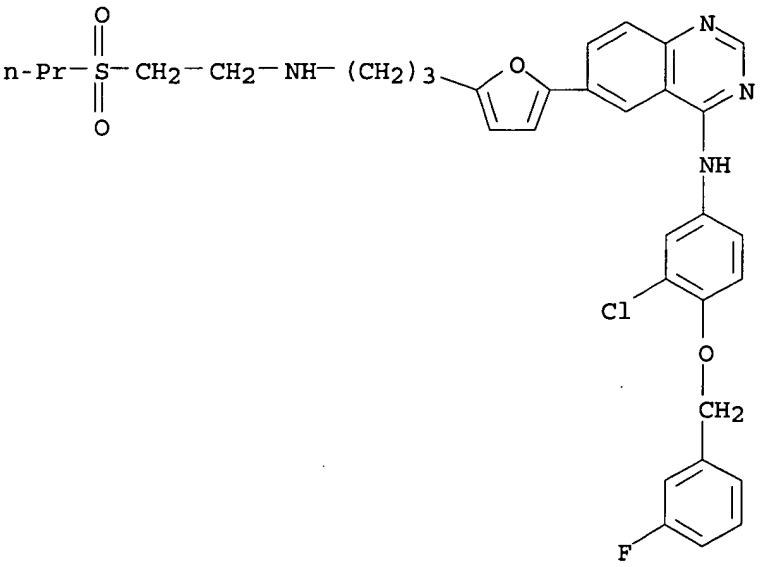
RN 319917-39-0 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-(phenylmethoxy)phenyl]-6-[5-[3-[[2-(methylsulfonyl)ethyl]amino]propyl]-2-furanyl]- (9CI) (CA INDEX NAME)



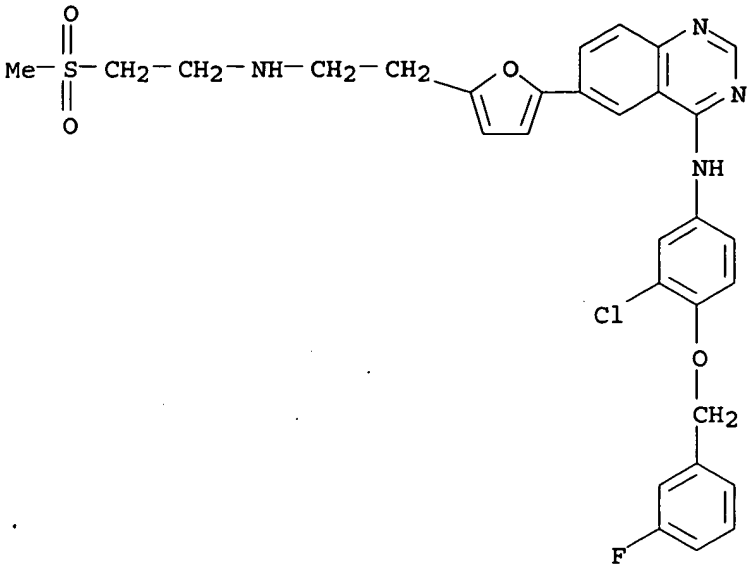
RN 319917-40-3 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[3-[[2-[(1-methylethyl)sulfonyl]ethyl]amino]propyl]-2-furanyl]- (9CI) (CA INDEX NAME)



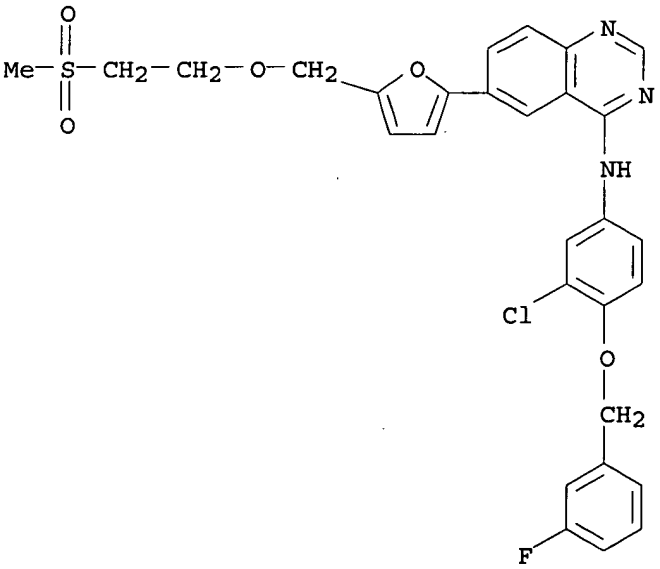
RN 319917-41-4 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[3-[[2-(propylsulfonyl)ethyl]amino]propyl]-2-furanyl]- (9CI) (CA INDEX NAME)



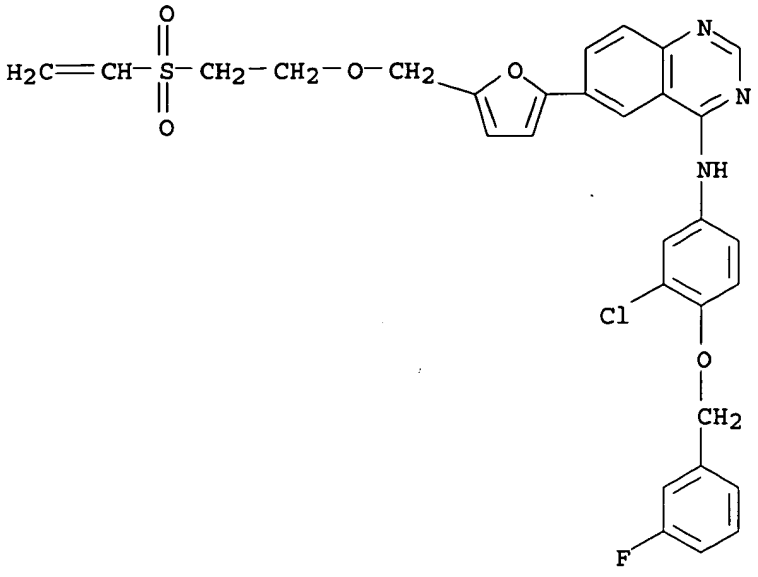
RN 319917-43-6 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[2-[[2-(methylsulfonyl)ethyl]amino]ethyl]-2-furanyl]- (9CI) (CA INDEX NAME)



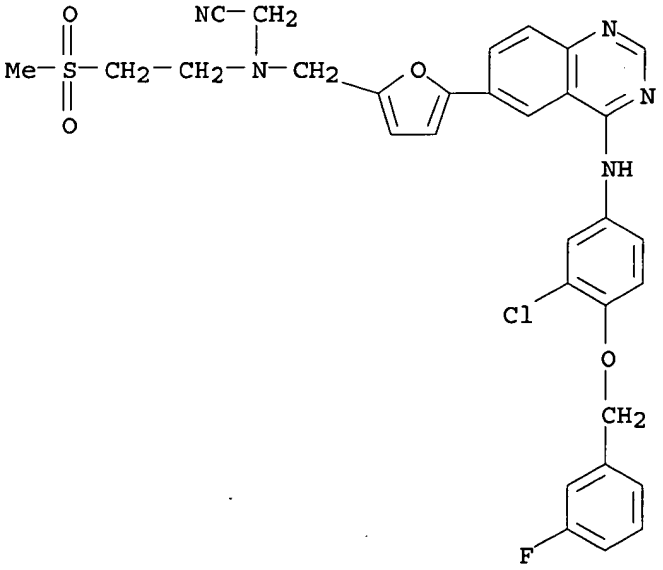
RN 319917-44-7 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[2-(methylsulfonyl)ethoxy]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



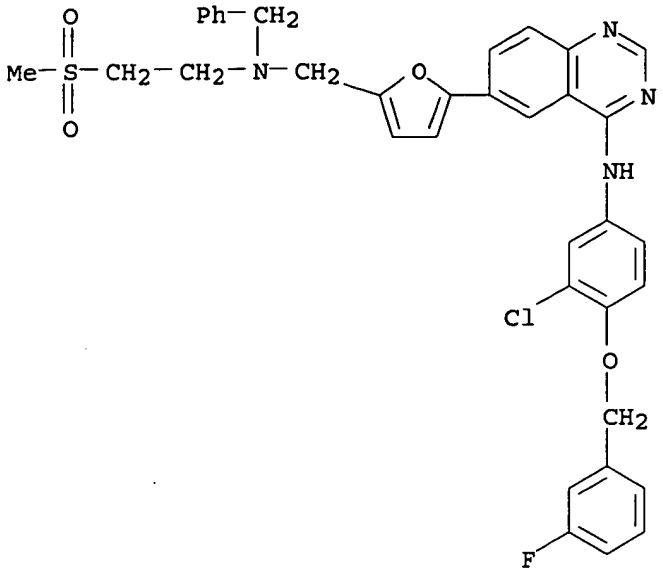
RN 319917-45-8 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[2-(ethenylsulfonyl)ethoxy]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



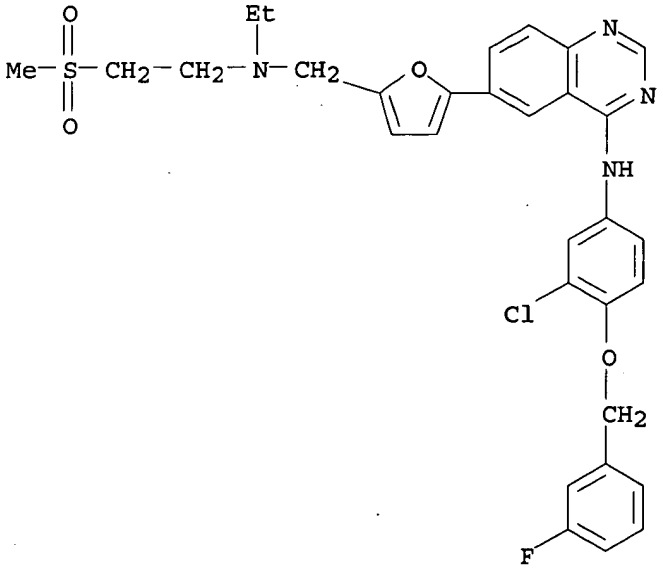
RN 319917-46-9 CAPLUS
CN Acetonitrile, [[[5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]-2-furanyl]methyl][2-(methylsulfonyl)ethyl]amino]- (9CI) (CA INDEX NAME)



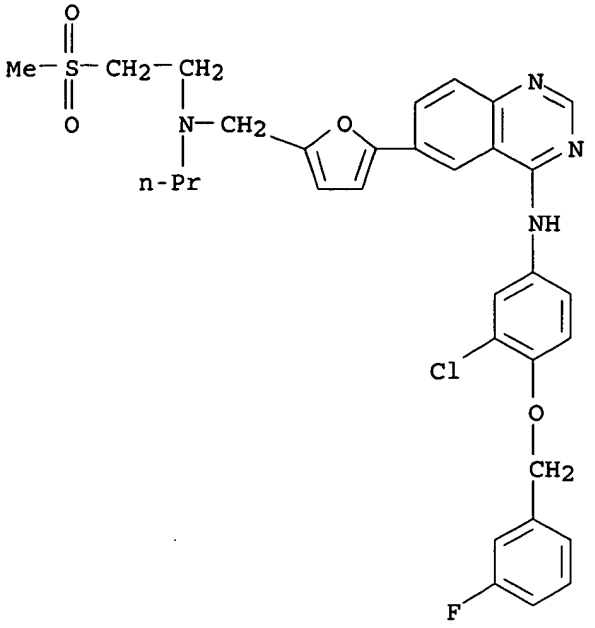
RN 320337-09-5 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl](phenylmethyl)amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



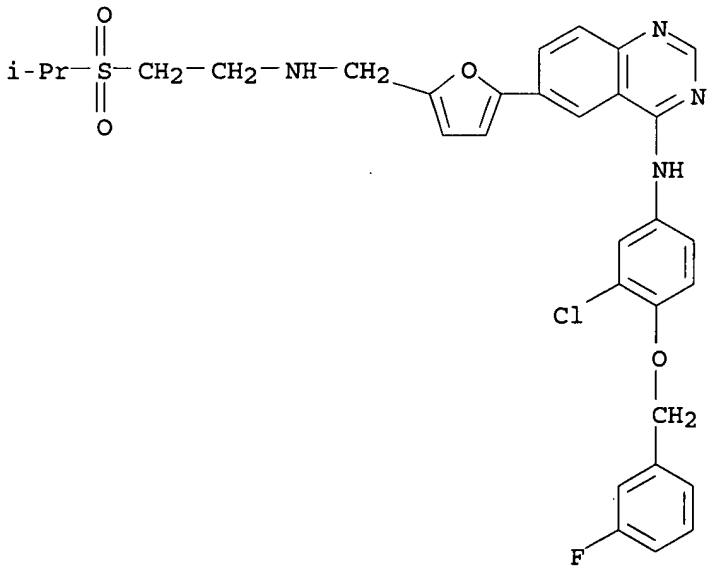
RN 320337-10-8 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[ethyl[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



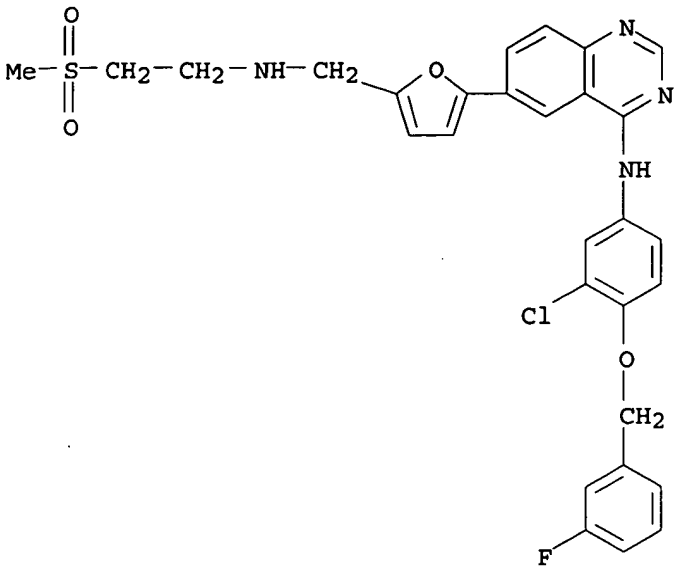
RN 320337-11-9 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]propylamino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



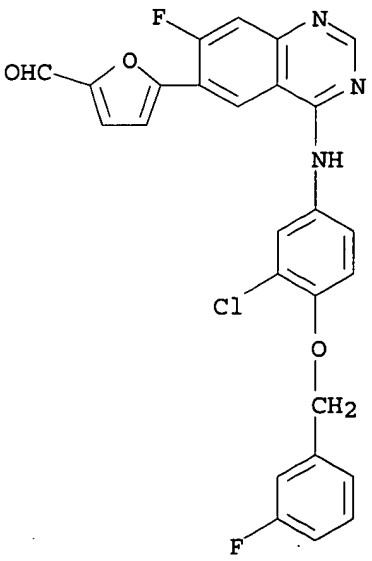
RN 320337-12-0 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-[(1-methylethyl)sulfonyl]ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



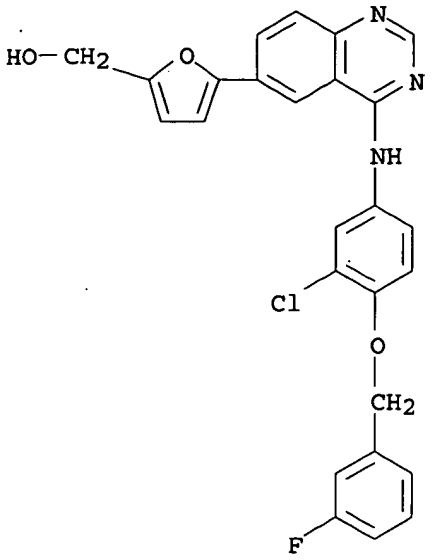
IT **231277-92-2 320337-47-1 320337-48-2**
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of anilinoquinazolines as protein tyrosine kinase inhibitors)
RN 231277-92-2 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



RN 320337-47-1 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-7-fluoro-6-quinazolinyl]- (9CI) (CA INDEX NAME)



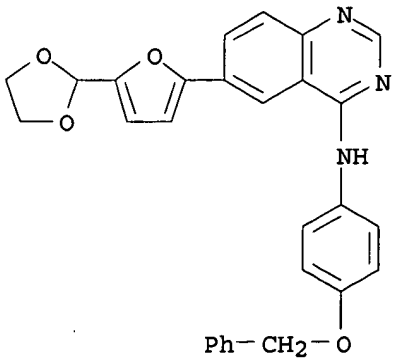
RN 320337-48-2 CAPLUS
CN 2-Furanmethanol, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



IT **202196-42-7P 202196-46-1P 202197-80-6P**
231278-28-7P 231278-33-4P 231278-36-7P
231278-40-3P 231278-46-9P 231278-83-4P
231278-84-5P 320337-25-5P 320337-26-6P
320337-27-7P 320337-28-8P 320337-29-9P
320337-30-2P 320337-31-3P 320337-32-4P
320337-36-8P 320337-37-9P 320337-38-0P
320337-39-1P 320337-40-4P 320337-41-5P
320337-42-6P 320337-43-7P 320337-44-8P
320337-45-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of anilinoquinazolines as protein tyrosine kinase inhibitors)

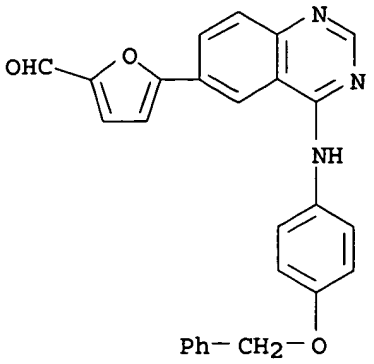
RN 202196-42-7 CAPLUS

CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

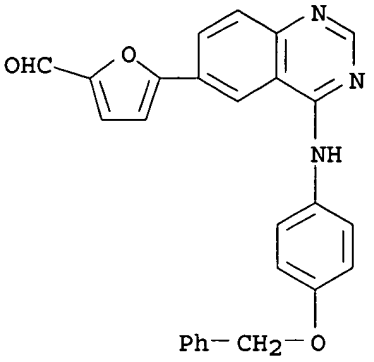


RN 202196-46-1 CAPLUS

CN 2-Furancarboxaldehyde, 5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

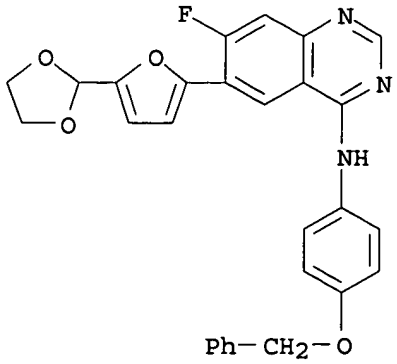


RN 202197-80-6 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)

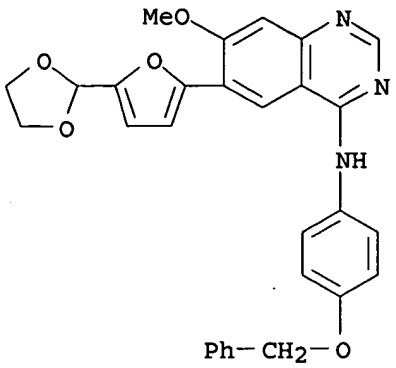


● HCl

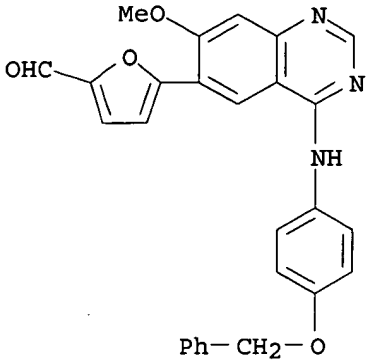
RN 231278-28-7 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-7-fluoro-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



RN 231278-33-4 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-7-methoxy-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

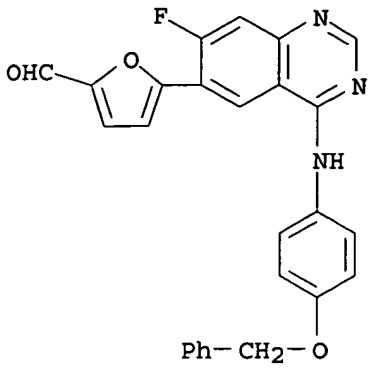


RN 231278-36-7 CAPLUS
CN 2-Furancarboxaldehyde, 5-[7-methoxy-4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



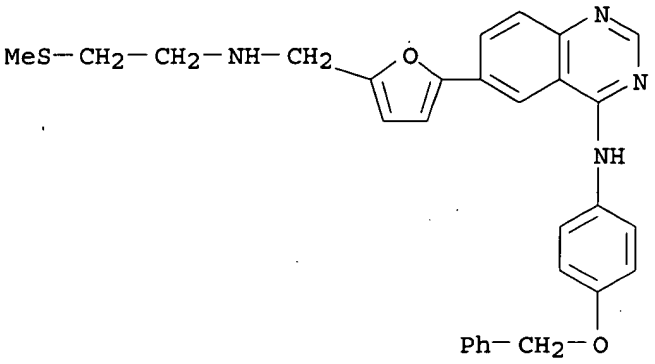
● HCl

RN 231278-40-3 CAPLUS
CN 2-Furancarboxaldehyde, 5-[7-fluoro-4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



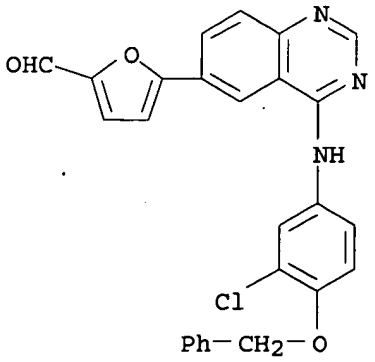
● HCl

RN 231278-46-9 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[[2-(methylthio)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]-, dihydrochloride (9CI) (CA INDEX NAME)

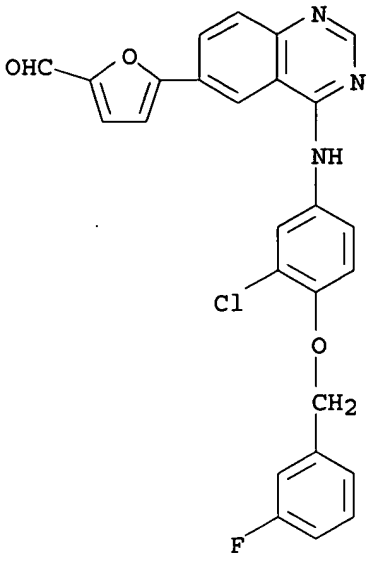


●2 HCl

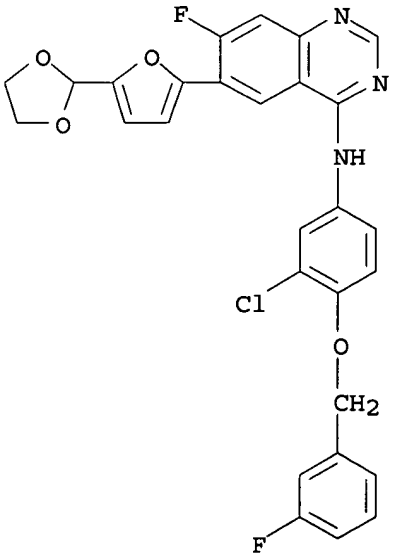
RN 231278-83-4 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



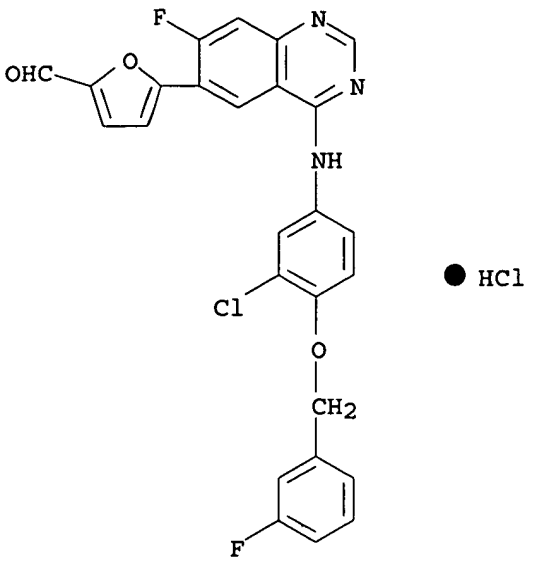
RN 231278-84-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



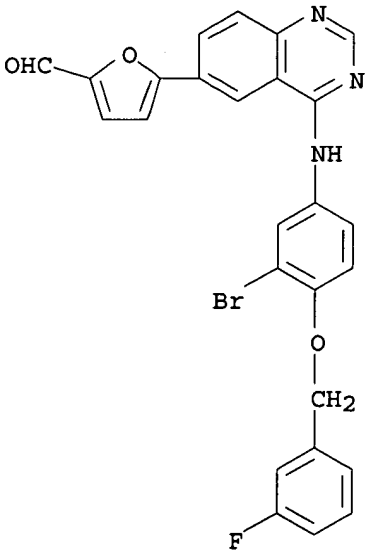
RN 320337-25-5 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-7-fluoro- (9CI) (CA INDEX NAME)



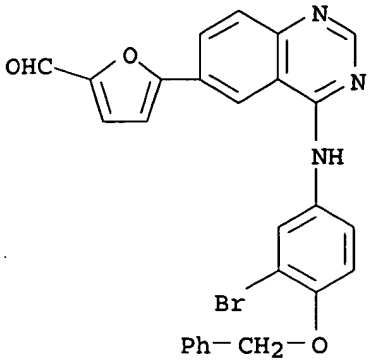
RN 320337-26-6 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-7-fluoro-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



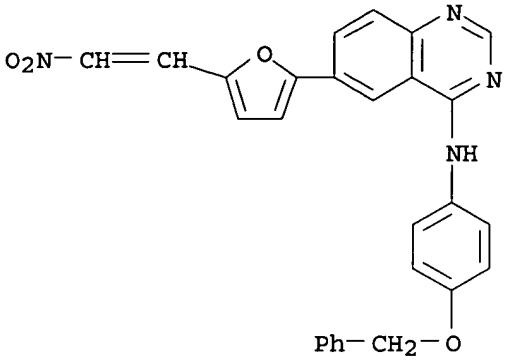
RN 320337-27-7 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-bromo-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



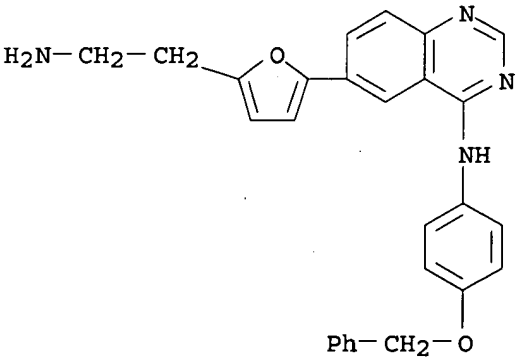
RN 320337-28-8 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-bromo-4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



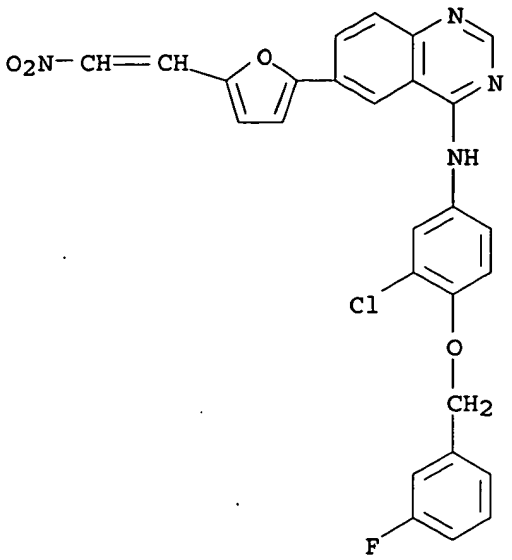
RN 320337-29-9 CAPLUS
CN 4-Quinazolinamine, 6-[5-(2-nitroethenyl)-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



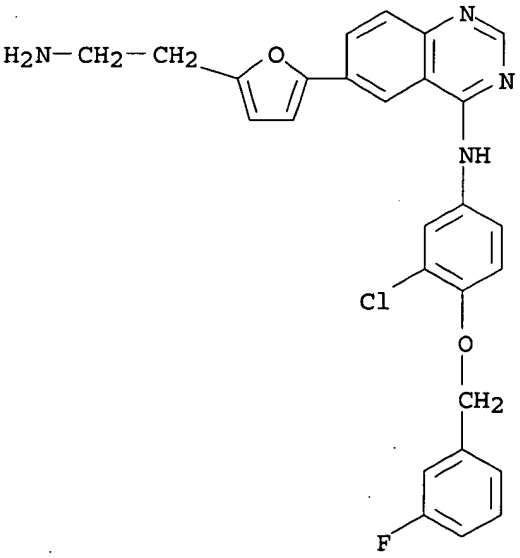
RN 320337-30-2 CAPLUS
CN 4-Quinazolinamine, 6-[5-(2-aminoethyl)-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



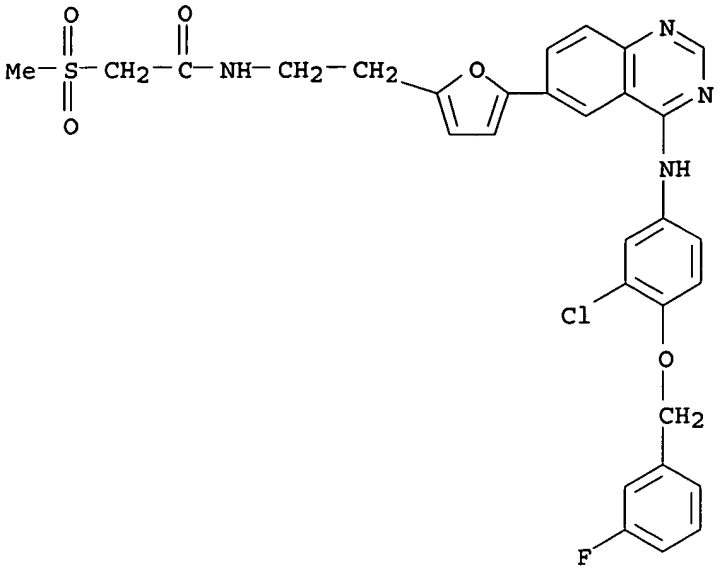
RN 320337-31-3 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-(2-nitroethenyl)-2-furanyl]- (9CI) (CA INDEX NAME)



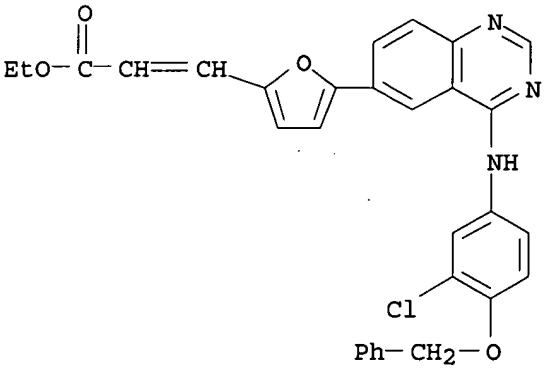
RN 320337-32-4 CAPLUS
CN 4-Quinazolinamine, 6-[5-(2-aminoethyl)-2-furanyl]-N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]- (9CI) (CA INDEX NAME)



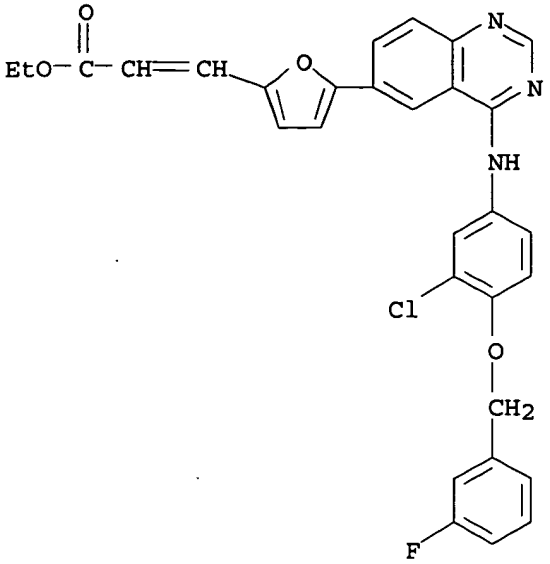
RN 320337-36-8 CAPLUS
CN Acetamide, N-[2-[5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]-2-furanyl]ethyl]-2-(methylsulfonyl)- (9CI) (CA INDEX NAME)



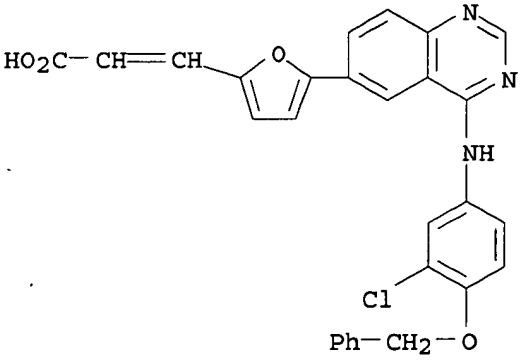
RN 320337-37-9 CAPLUS
CN 2-Propenoic acid, 3-[5-[4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-2-furanyl]-, ethyl ester (9CI) (CA INDEX NAME)



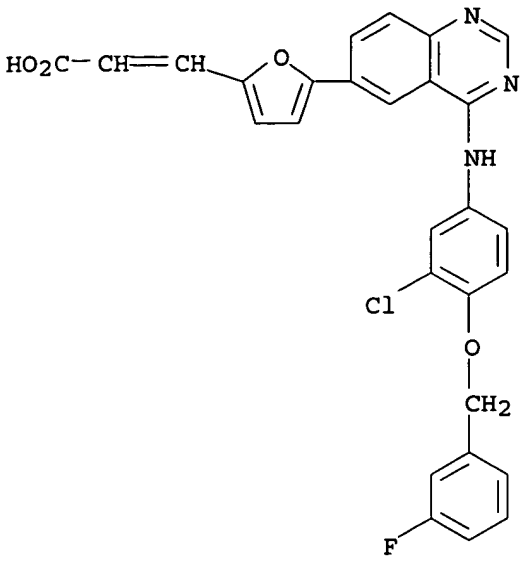
RN 320337-38-0 CAPLUS
CN 2-Propenoic acid, 3-[5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]-2-furanyl]-, ethyl ester (9CI) (CA INDEX NAME)



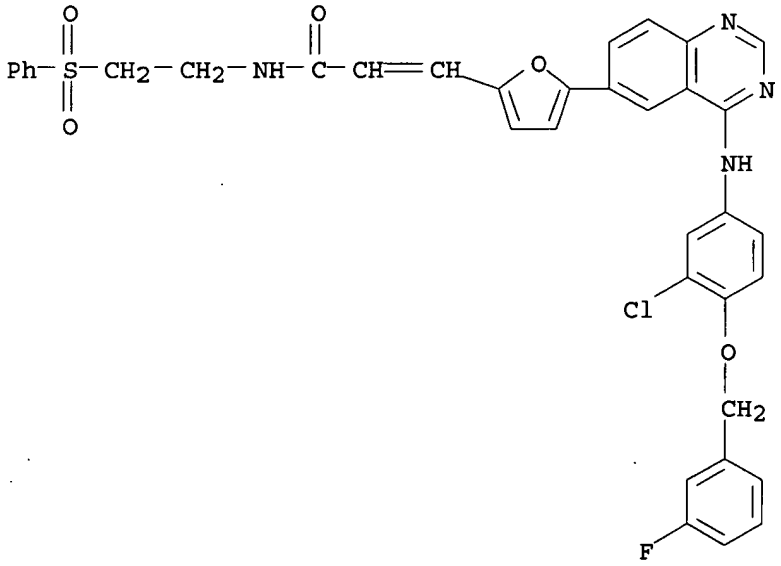
RN 320337-39-1 CAPLUS
CN 2-Propenoic acid, 3-[5-[4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-2-furanyl]- (9CI) (CA INDEX NAME)



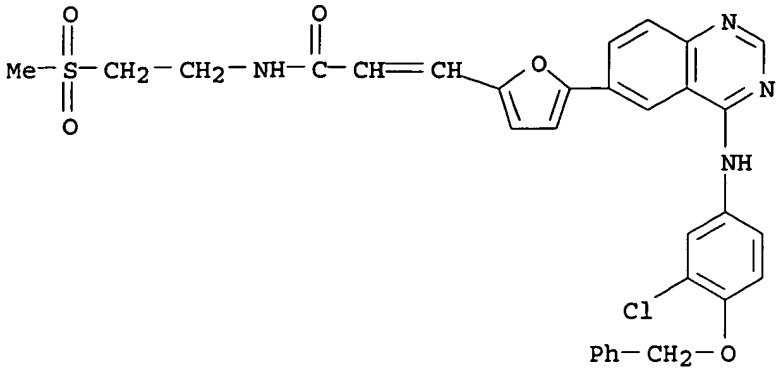
RN 320337-40-4 CAPLUS
CN 2-Propenoic acid, 3-[5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]-2-furanyl]- (9CI) (CA INDEX NAME)



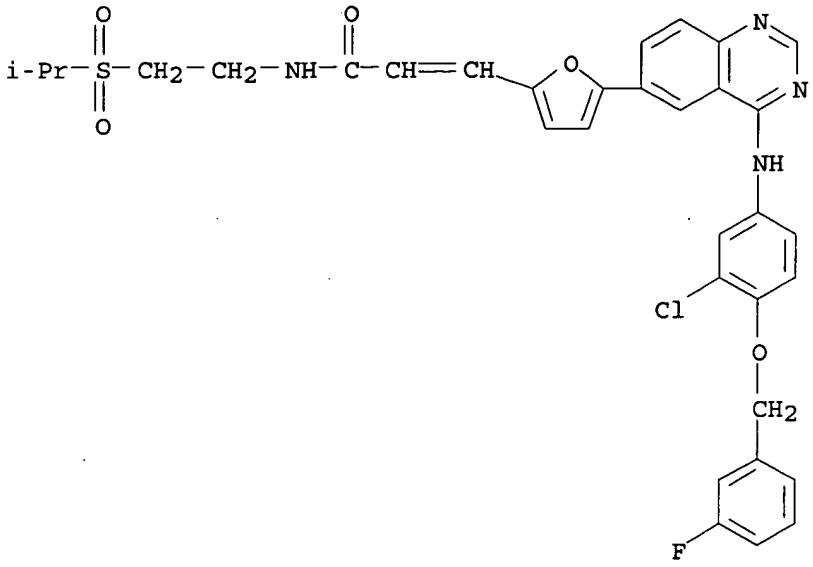
RN 320337-41-5 CAPLUS
CN 2-Propenamide, 3-[5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]-2-furanyl]-N-[2-(phenylsulfonyl)ethyl]- (9CI) (CA INDEX NAME)



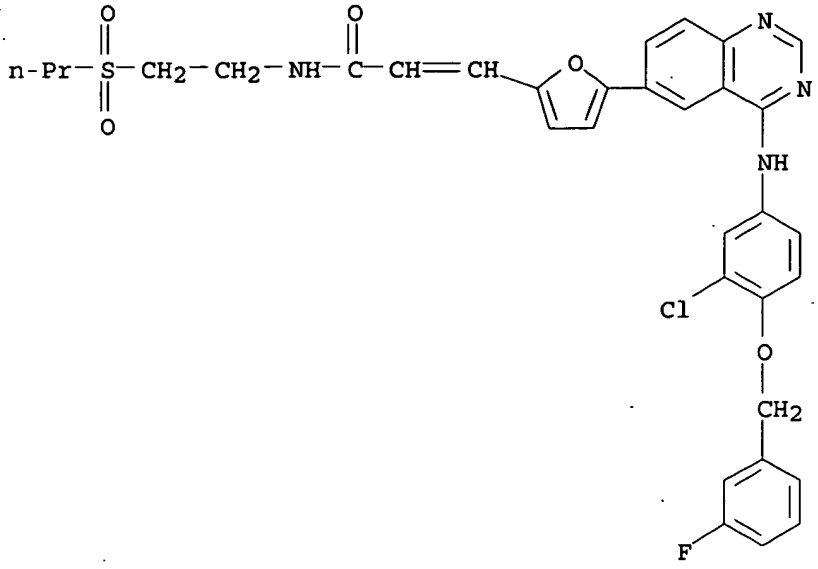
RN 320337-42-6 CAPLUS
CN 2-Propenamide, 3-[5-[4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-2-furanyl]-N-[2-(methylsulfonyl)ethyl]- (9CI) (CA INDEX NAME)



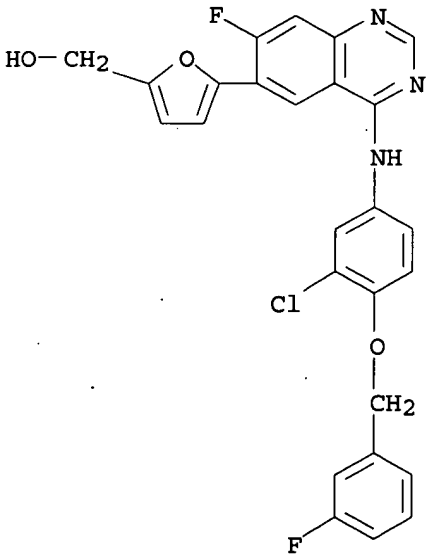
RN 320337-43-7 CAPLUS
CN 2-Propenamide, 3-[5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]-2-furanyl]-N-[2-[(1-methylethyl)sulfonyl]ethyl]- (9CI) (CA INDEX NAME)



RN 320337-44-8 CAPLUS
CN 2-Propenamide, 3-[5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]-2-furanyl]-N-[2-(propylsulfonyl)ethyl]- (9CI) (CA INDEX NAME)



RN 320337-45-9 CAPLUS
CN 2-Furanmethanol, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-7-fluoro-6-quinazolinyl]- (9CI) (CA INDEX NAME)



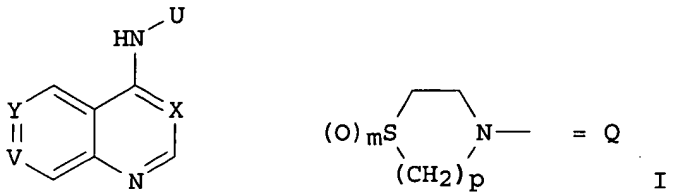
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:854415 CAPLUS
DOCUMENT NUMBER: 133:362769
TITLE: Preparation of 6-(thiomorpholinomethylfuranyl)-4-quinazolinamines as protein tyrosine kinase inhibitors
INVENTOR(S): Carter, Malcolm Clive; Cockerill, George Stuart; Guntrip, Stephen Barry; Lackey, Karen Elizabeth; Smith, Kathryn Jane
PATENT ASSIGNEE(S): Glaxo Group Ltd., UK
SOURCE: Brit. UK Pat. Appl., 151 pp.

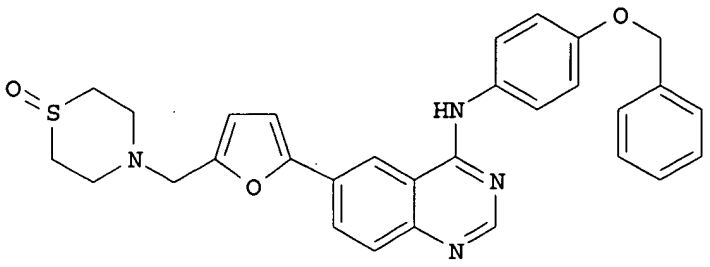
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2345486	A1	20000712	GB 1999-29973	19991217

PRIORITY APPLN. INFO.: GB 1999-518 A 19990111
GB 1999-15510 A 19990703
OTHER SOURCE(S): MARPAT 133:362769
GI



I



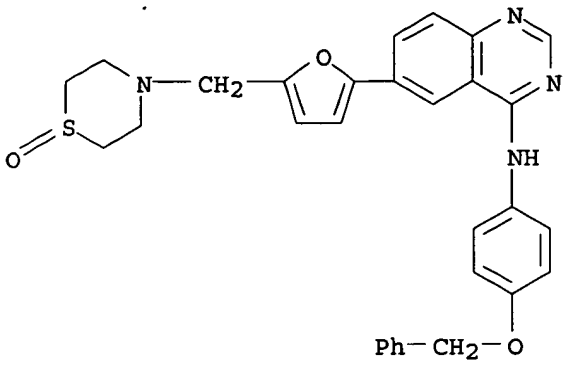
II

AB The title compds. (I) [wherein X = N or CH; V and Y = independently CR1, CR2, or N; and V .noteq. Y; R1 = Q(CH2)qAr; m = 1 or 2; p = 1 or 2; q = 1-4; Ar = (un)substituted Ph, furanyl, thiophenyl, pyrrolyl, or thiazolyl; R2 = H, halo, OH, alkyl(amino) alkoxy, or dialkylamino; U = (un)substituted Ph, pyridyl, (benz)imidazolyl, (iso)indolyl, (iso)indolinyl, indazolyl, or benzotriazolyl] were prepd. as protein tyrosine kinase inhibitors for the treatment of cancer and other disorders mediated by aberrant protein tyrosine kinase activity. For example, II.bul.2HCl was formed in a multi-step sequence involving (1) reaction of 5-(1,3-dioxolan-2-yl)-2-(tributylstannyl)furan with (4-benzyloxyphenyl)(6-bromoquinazolin-4-yl)amine using Pd(PPh3)2Cl2 in dioxane, (2) conversion of the cyclic acetal to the aldehyde with HCl in THF, (3) addn. of thiomorpholine-S-oxide in CH2Cl2 and conversion to the HCl salt. I inhibited EGFR and c-erbB-2 tyrosine kinase with IC50 < 0.10 .mu.M and suppressed cell proliferation against a range of tumor cell lines.

IT **307328-02-5P**, (4-Benzyloxyphenyl)-[6-[5-(1-oxothiomorpholin-4-ylmethyl)furan-2-yl]quinazolin-4-yl]amine dihydrochloride
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of thiomorpholinomethylfuranyl quinazolinamine and pyrido[3,4-d]pyrimidinamine anticancer agents by amination of (haloheterocyclyl)furancarboxaldehydes with anilines followed by addn. of thiomorpholine (oxides))

10/ 030,527

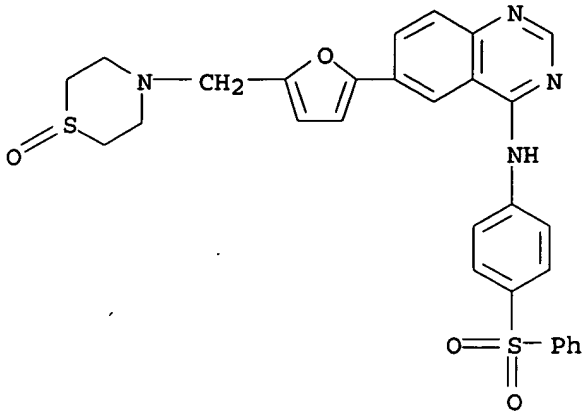
RN 307328-02-5 CAPLUS
CN 4-Quinazolinamine, 6-[5-[(1-oxido-4-thiomorpholinyl)methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

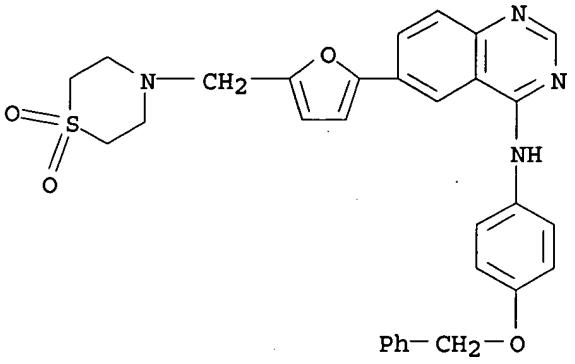
IT **307328-18-3P 307328-20-7P**, (4-Benzyloxyphenyl)-[6-[5-((1,1-dioxothiomorpholin-4-yl)methyl)furan-2-yl]quinazolin-4-yl]amine dihydrochloride **307328-24-1P**, (4-Benzyloxy-3-fluorophenyl)-(6-(5-((1-oxothiomorpholin-4-yl)methyl)furan-2-yl)quinazolin-4-yl)amine **307328-27-4P**, [4-((3-Fluorobenzyl)oxy)-3-(trifluoromethyl)phenyl]-[6-[5-((1-oxothiomorpholin-4-yl)methyl)furan-2-yl]quinazolin-4-yl]amine **307328-31-0P**, (4-((3-Fluorobenzyl)oxy)-3-chlorophenyl)-(6-(5-((1-oxothiomorpholin-4-yl)methyl)furan-2-yl)quinazolin-4-yl)amine **307328-38-7P**, (4-Benzyloxy-3-chlorophenyl)-[6-[5-((1-oxothiomorpholin-4-yl)methyl)furan-2-yl]quinazolin-4-yl]amine **307328-41-2P**, (4-(3-Fluorobenzyloxy)-3-chlorophenyl)-(6-((5-(thiazolidin-3-yl)methyl)furan-2-yl)quinazolin-4-yl)amine dihydrochloride
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of thiomorpholinomethylfuranyl quinazolinamine and pyrido[3,4-d]pyrimidinamine anticancer agents by amination of (haloheterocyclyl)furancarboxaldehydes with anilines followed by addn. of thiomorpholine (oxides))

RN 307328-18-3 CAPLUS
CN 4-Quinazolinamine, 6-[5-[(1-oxido-4-thiomorpholinyl)methyl]-2-furanyl]-N-[4-(phenylsulfonyl)phenyl]-, dihydrochloride (9CI) (CA INDEX NAME)



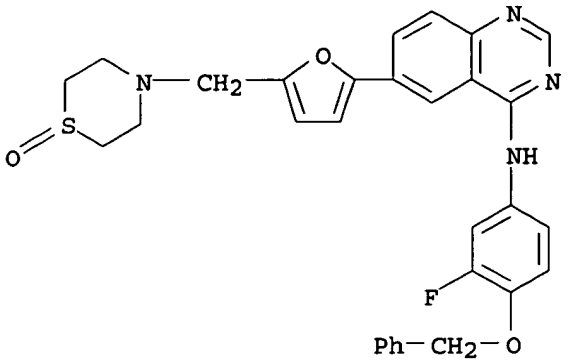
●2 HCl

RN 307328-20-7 CAPLUS
CN 4-Quinazolinamine, 6-[5-[(1,1-dioxido-4-thiomorpholinyl)methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]-, dihydrochloride (9CI) (CA INDEX NAME)

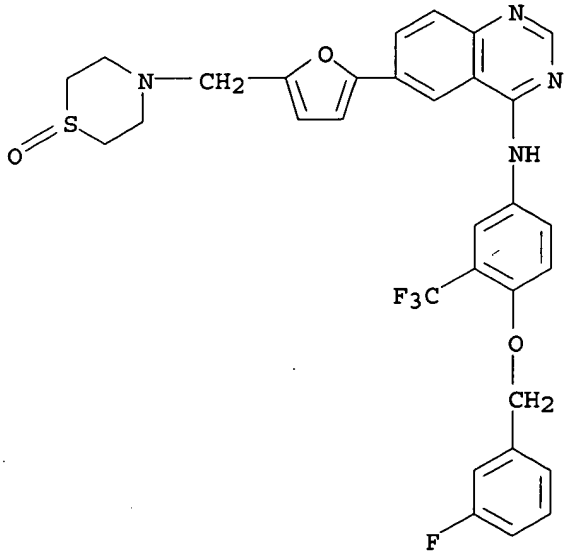


●2 HCl

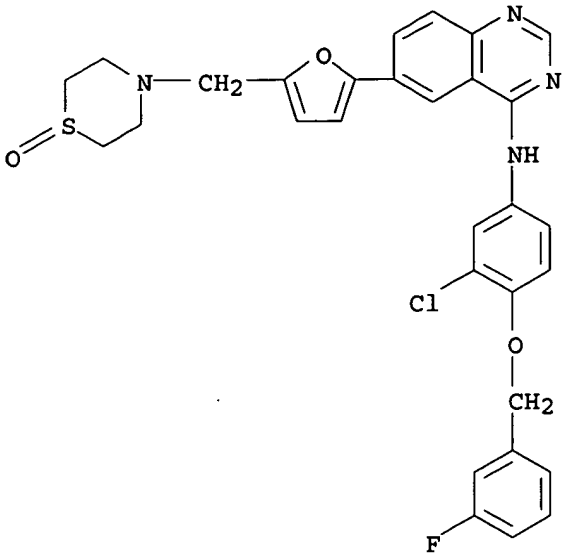
RN 307328-24-1 CAPLUS
CN 4-Quinazolinamine, N-[3-fluoro-4-(phenylmethoxy)phenyl]-6-[5-[(1-oxido-4-thiomorpholinyl)methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



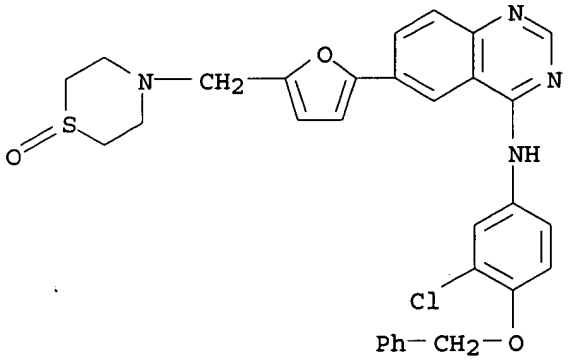
RN 307328-27-4 CAPLUS
CN 4-Quinazolinamine, N-[4-[(3-fluorophenyl)methoxy]-3-(trifluoromethyl)phenyl]-6-[5-[(1-oxido-4-thiomorpholinyl)methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



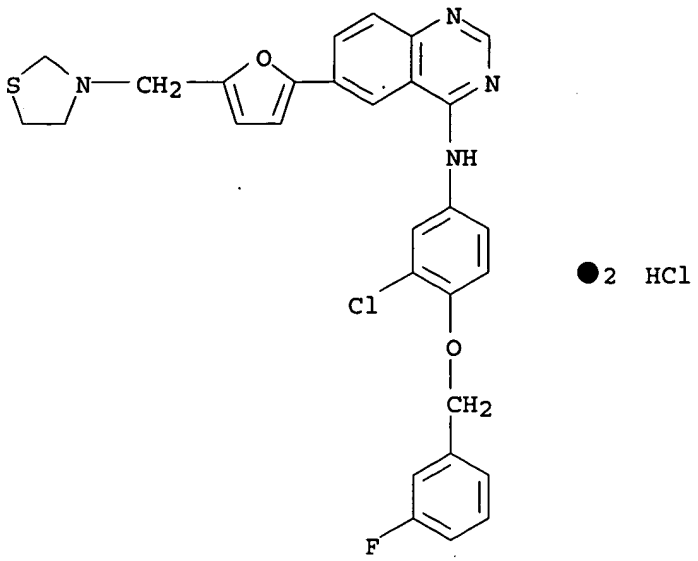
RN 307328-31-0 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[(1-oxido-4-thiomorpholinyl)methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



RN 307328-38-7 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-(phenylmethoxy)phenyl]-6-[5-[(1-oxido-4-thiomorpholinyl)methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



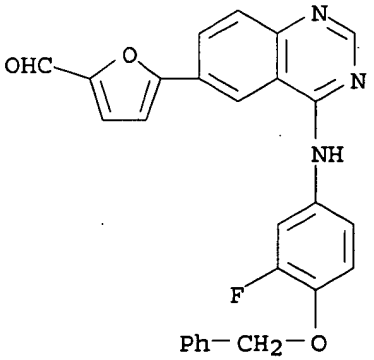
RN 307328-41-2 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-(3-thiazolidinylmethyl)-2-furanyl]-, dihydrochloride (9CI) (CA INDEX NAME)



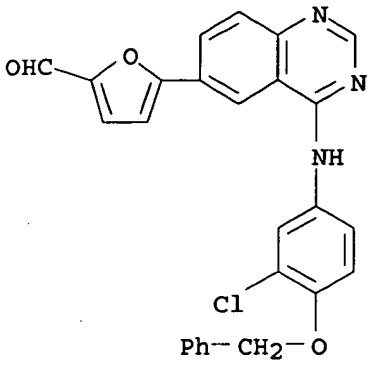
● 2 HCl

IT **231278-82-3 231278-83-4**, [5-[4-[4-(Benzyloxy)-3-chloroanilino]-6-quinazolinyl]-2-furancarboxaldehyde **231278-84-5**, [5-[4-[4-[(3-Fluorobenzyl)oxy]-3-chloroanilino]-6-quinazolinyl]-2-furancarboxaldehyde **307328-29-6**, [5-[4-[4-[(3-Fluorobenzyl)oxy]-3-(trifluoromethyl)anilino]-6-quinazolinyl]-2-furancarboxaldehyde
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of thiomorpholinomethylfuranyl quinazolinamine and pyrido[3,4-d]pyrimidinamine anticancer agents by amination of (haloheterocyclyl)furancarboxaldehydes with anilines followed by addn. of thiomorpholine (oxides))

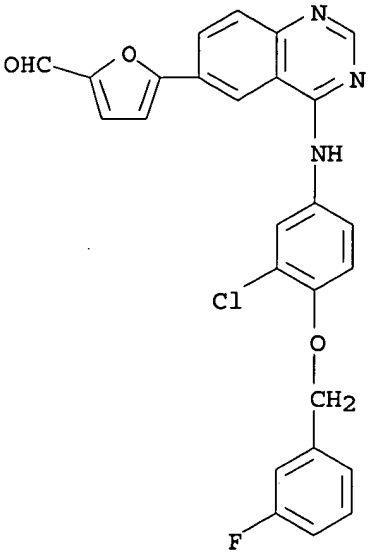
RN 231278-82-3 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-fluoro-4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



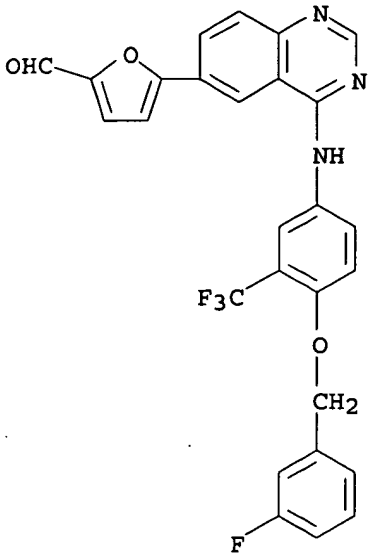
RN 231278-83-4 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



RN 231278-84-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



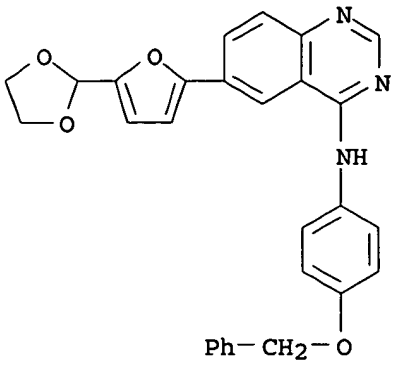
RN 307328-29-6 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-[(3-fluorophenyl)methoxy]-3-(trifluoromethyl)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



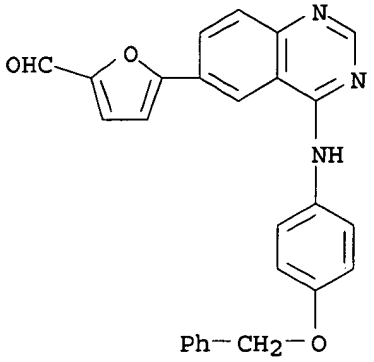
IT **202196-42-7P**, (4-Benzyloxyphenyl)-[6-[5-(1,3-dioxolan-2-yl)furan-2-yl]quinazolin-4-yl]amine **202196-46-1P**, 5-[4-(4-Benzyloxyphenylamino)quinazolin-6-yl]furan-2-carbaldehyde **202197-80-6P**, 5-[4-(4-Benzyloxyphenylamino)quinazolin-6-yl]furan-2-carbaldehyde hydrochloride **231278-28-7P**, (4-Benzyloxyphenyl)-[6-[5-(1,3-dioxolan-2-yl)furan-2-yl]-7-fluoroquinazolin-4-yl]amine **231278-30-1P 231278-31-2P**, (4-Benzyloxy-3-trifluoromethylphenyl)-[6-[5-(1,3-dioxolan-2-yl)furan-2-yl]quinazolin-4-yl]amine **231278-32-3P**, 5-[4-(4-Benzyloxy-3-trifluoromethylphenylamino)quinazolin-6-yl]furan-2-carbaldehyde **231278-33-4P**, (4-Benzyloxyphenyl)-[6-[5-(1,3-dioxolan-2-yl)furan-2-yl]-7-methoxyquinazolin-4-yl]amine **231278-36-7P**, 5-[4-(4-Benzyloxyphenylamino)-7-methoxyquinazolin-6-yl]furan-2-carbaldehyde hydrochloride **231278-37-8P**, [6-[5-(1,3-Dioxolan-2-yl)furan-2-yl]-7-methoxyquinazolin-4-yl](4-(benzenesulphonyl)phenyl)amine **231278-39-0P**, 5-[7-Methoxy-4-((4-(benzenesulphonyl)phenyl)amino)quinazolin-6-yl]furan-2-carbaldehyde hydrochloride **231278-40-3P**, 5-[4-(4-Benzyloxyphenylamino)-7-fluoroquinazolin-6-yl]furan-2-carboxaldehyde hydrochloride **231278-42-5P 231278-46-9P 307327-40-8P**, (4-Benzyloxyphenyl)(6-(5-(thiomorpholin-4-ylmethyl)furan-2-yl)quinazolin-4-yl)amine hydrochloride **307327-44-2P**, [4-(Benzenesulphonyl)phenyl]-[6-[5-(1,3-dioxolan-2-yl)furan-2-yl]quinazolin-4-yl]amine **307327-47-5P**, 5-[4-((4-(Benzenesulphonyl)phenyl)amino)quinazolin-6-yl]furan-2-carbaldehyde **307327-53-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of thiomorpholinomethylfuranyl quinazolinamine and pyrido[3,4-d]pyrimidinamine anticancer agents by amination of (haloheterocyclyl)furancarboxaldehydes with anilines followed by addn. of thiomorpholine (oxides))

RN 202196-42-7 CAPLUS

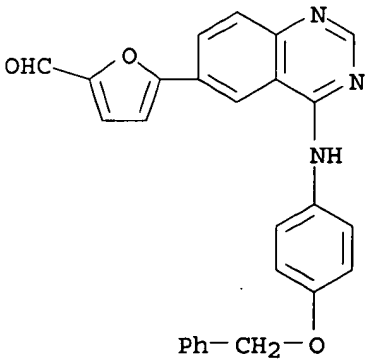
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



RN 202196-46-1 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

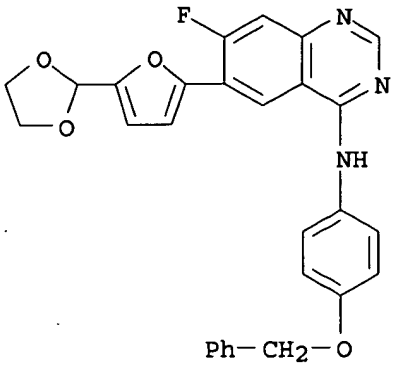


RN 202197-80-6 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)

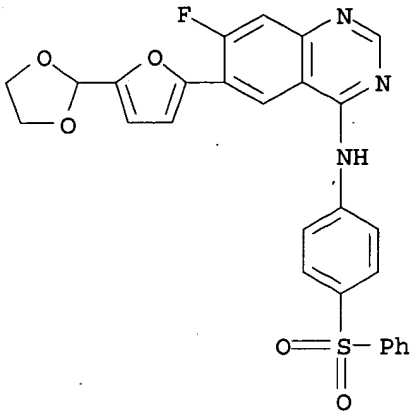


● HCl

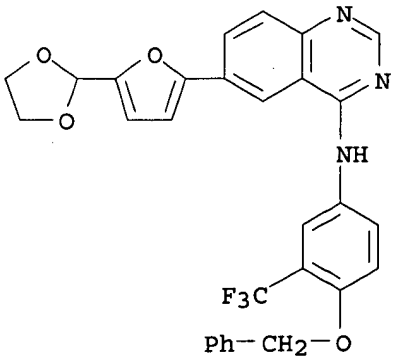
RN 231278-28-7 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-7-fluoro-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



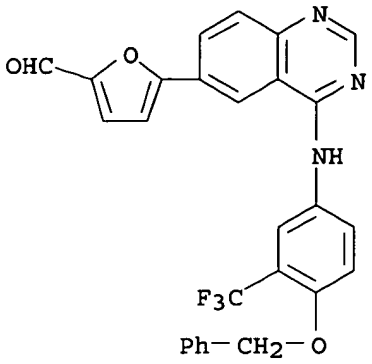
RN 231278-30-1 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-7-fluoro-N-[4-(phenylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)



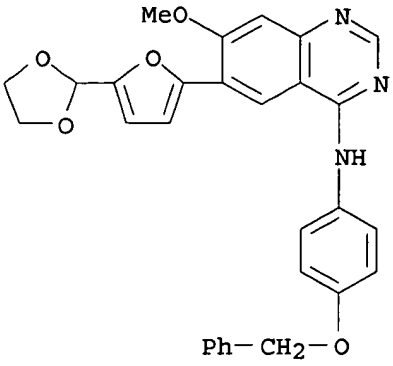
RN 231278-31-2 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-N-[4-(phenylmethoxy)-3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



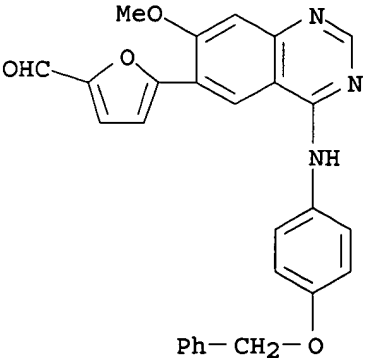
RN 231278-32-3 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-(phenylmethoxy)-3-(trifluoromethyl)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



RN 231278-33-4 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-7-methoxy-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

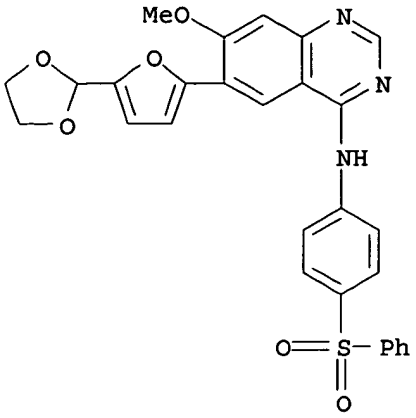


RN 231278-36-7 CAPLUS
CN 2-Furancarboxaldehyde, 5-[7-methoxy-4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)

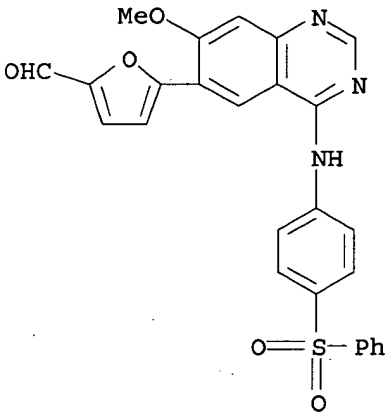


HCl

RN 231278-37-8 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-7-methoxy-N-[4-(phenylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)

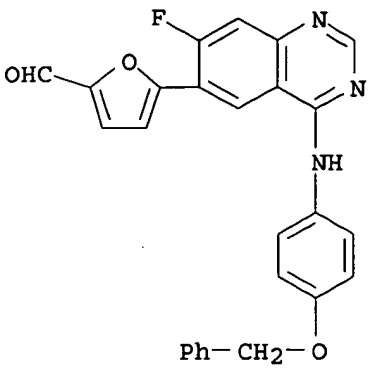


RN 231278-39-0 CAPLUS
CN 2-Furancarboxaldehyde, 5-[7-methoxy-4-[[4-(phenylsulfonyl)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



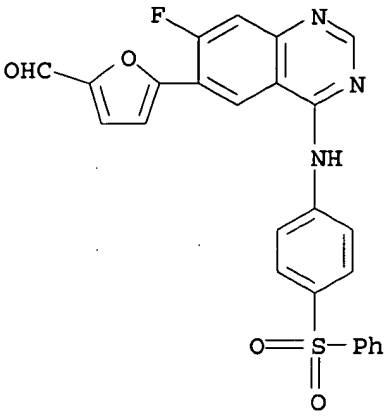
● HCl

RN 231278-40-3 CAPLUS
CN 2-Furancarboxaldehyde, 5-[7-fluoro-4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



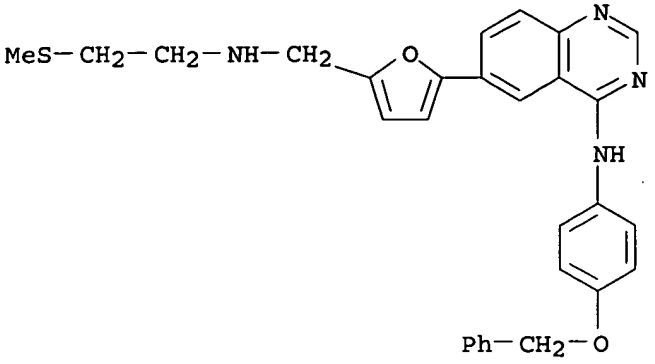
● HCl

RN 231278-42-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[7-fluoro-4-[[4-(phenylsulfonyl)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



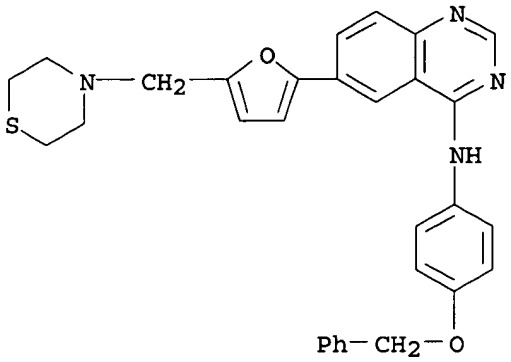
● HCl

RN 231278-46-9 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[[2-(methylthio)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]-, dihydrochloride (9CI) (CA INDEX NAME)



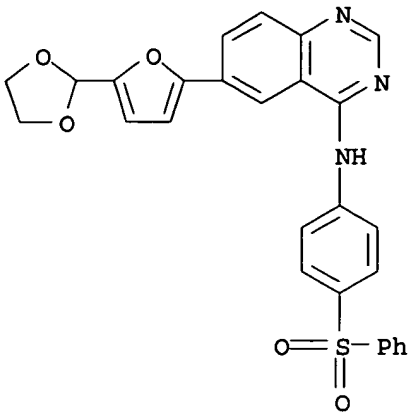
● 2 HCl

RN 307327-40-8 CAPLUS
CN 4-Quinazolinamine, N-[4-(phenylmethoxy)phenyl]-6-[5-(4-thiomorpholinylmethyl)-2-furanyl]-, monohydrochloride (9CI) (CA INDEX NAME)

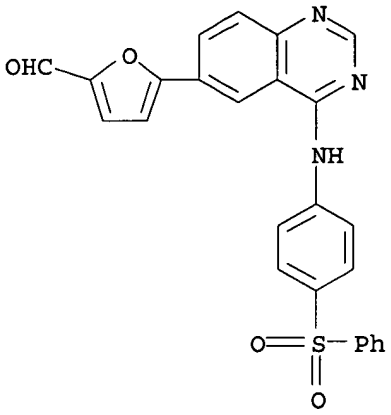


● HCl

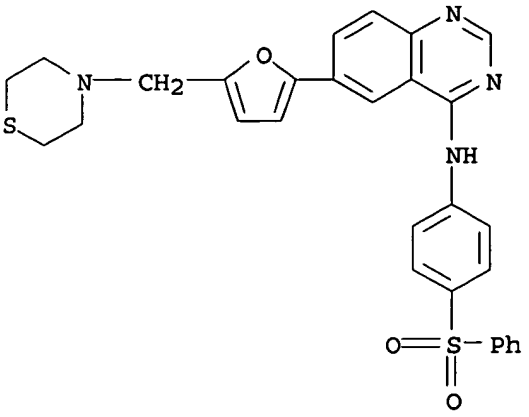
RN 307327-44-2 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-N-[4-(phenylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)



RN 307327-47-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-(phenylsulfonyl)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



RN 307327-53-3 CAPLUS
CN 4-Quinazolinamine, N-[4-(phenylsulfonyl)phenyl]-6-[5-(4-thiomorpholinylmethyl)-2-furanyl]-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

L3 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:451297 CAPLUS
DOCUMENT NUMBER: 131:102288
TITLE: Bicyclic heteroaromatic compounds [quinazolinamines, pyridopyrimidines, and analogs] useful as protein tyrosine kinase inhibitors
INVENTOR(S): Carter, Malcolm Clive; Cockerill, George Stuart; Guntrip, Stephen Barry; Lackey, Karen Elizabeth; Smith, Kathryn Jane
PATENT ASSIGNEE(S): Glaxo Group Limited, UK
SOURCE: PCT Int. Appl., 129 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9935146	A1	19990715	WO 1999-EP48	19990108
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2317589	AA	19990715	CA 1999-2317589	19990108
AU 9922783	A1	19990726	AU 1999-22783	19990108
AU 749549	B2	20020627		
BR 9906904	A	20001017	BR 1999-6904	19990108
EP 1047694	A1	20001102	EP 1999-902522	19990108
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EE 200000411	A	20011217	EE 2000-411	19990108
JP 2002500225	T2	20020108	JP 2000-527545	19990108
JP 3390741	B2	20030331		
JP 2002326990	A2	20021115	JP 2002-92102	19990108

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ZA 9900172	A	20000711	ZA 1999-172	19990111
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US 2002147205	A1	20021010	US 2002-71358	20020208
US 2003176451	A1	20030918	US 2003-342810	20030115

PRIORITY APPLN. INFO.: GB 1998-569 A 19980112
JP 2000-527545 A3 19990108
WO 1999-EP48 W 19990108
US 2000-582746 A1 20000630

OTHER SOURCE(S): MARPAT 131:102288

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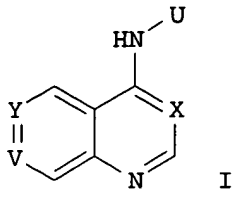

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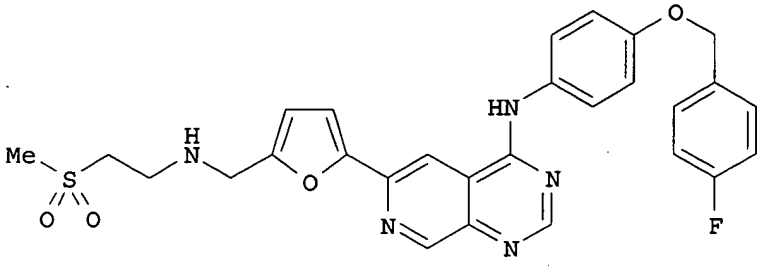


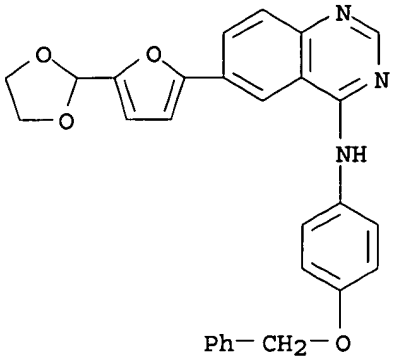
II

AB Title compds. I and their salts and solvates are disclosed [wherein X = N or CH; Y = CR1 and V = N; or Y = N and V = CR1; or Y = CR1 and V = CR2; or Y = CR2 and V = CR1; R1 = MeSO2CH2CH2NHCH2-Ar-, wherein Ar = (un)substituted Ph, furan, thiophene, pyrrole, or thiazole; R2 = H, halo, OH, C1-4 alkyl, C1-4 alkoxy, C1-4 alkylamino, or di[C1-4 alkyl]amino; U = Ph, pyridyl, 3H-imidazolyl, indolyl, isoindolyl, indolinyl, isoindolinyl, 1H-indazolyl, 2,3-dihydro-1H-indazolyl, 1H-benzimidazolyl, 2,3-dihydro-1H-benzimidazolyl or 1H-benzotriazolyl group, substituted by R3 and optionally by R4; R3 = (halo)benzyl, benzoyl, pyridylmethyl, pyridylmethoxy, phenoxy, benzyloxy, halo-, dihalo- and (halo)benzyloxy, PhSO2, (trihalomethyl)benzyl, (trihalomethyl)benzyloxy, (R5)n-substituted phthalimido; R4 = OH, halo, C1-4 alkyl, C2-4 alkenyl, C2-4 alkynyl, C1-4 alkoxy, (di)(alkyl)amino, C1-4 alkylthio, etc.; R5 = halo, C1-4 alkyl, C1-4 alkoxy; n = 0-3]. Also disclosed are methods for their prepn., pharmaceutical compns. contg. them, and their use in medicine. The compds. are inhibitors of protein tyrosine kinases, and as such are useful in the treatment of cancer, psoriasis, and rheumatoid arthritis. Over 40 title compds. and numerous intermediates were prepd. For example, 4,6-dichloropyrido[3,4-d]pyrimidine was condensed with 4-[(4-fluorobenzyl)oxy]aniline at the 4-chloro position, followed by Pd-catalyzed coupling with 5-(1,3-dioxolan-2-yl)-2-(tributylstannyl)furan at the 6-chloro position, hydrolysis of the dioxolane protecting group to give an aldehyde, reductive amination of the latter with MeSCH2CH2NH2, and finally S-oxidn. with Oxone .RTM. and acidification, to give title salt II.2HCl. In a methylene blue growth inhibition assay against 5 tumor cell

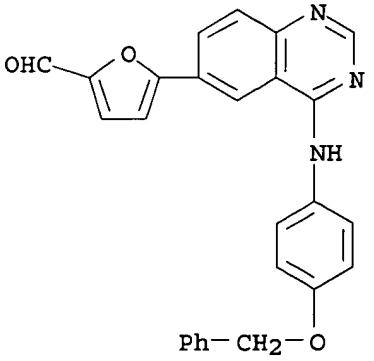
lines, II.2HCl had an IC50 of < 5 .mu.M against 4 of them, and an IC50 of 25-50 .mu.M against the 5th.

IT **202196-42-7P 202196-46-1P 202197-80-6P**
231278-28-7P 231278-30-1P 231278-31-2P
231278-32-3P 231278-33-4P 231278-36-7P
231278-37-8P 231278-39-0P 231278-40-3P
231278-42-5P 231278-46-9P 231278-63-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; prepn. of quinazolinamines and analogs as protein tyrosine kinase inhibitors)

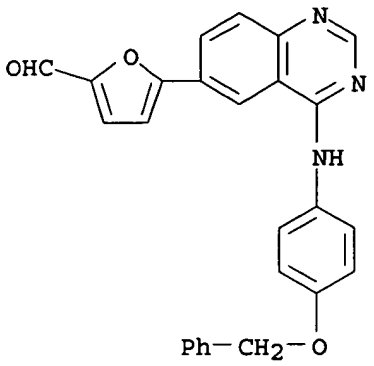
RN 202196-42-7 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



RN 202196-46-1 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

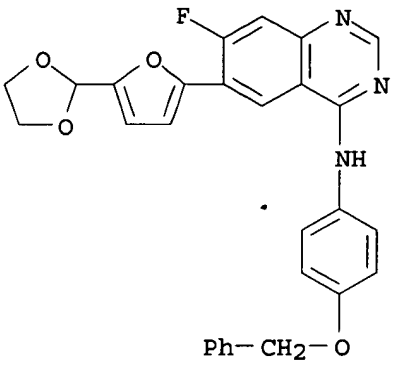


RN 202197-80-6 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)

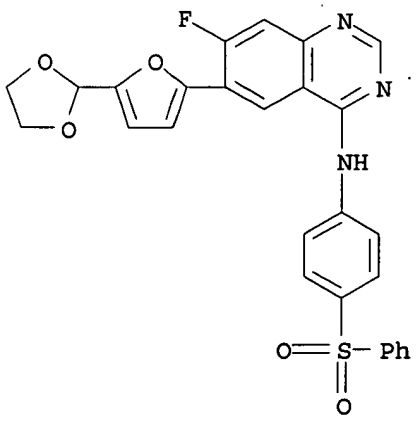


● HCl

RN 231278-28-7 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-7-fluoro-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



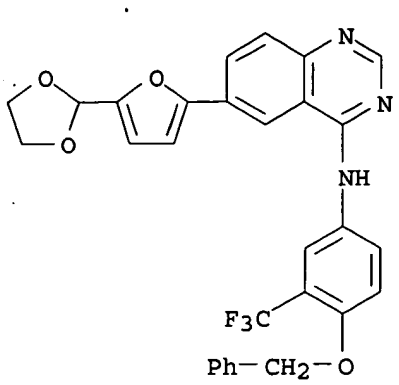
RN 231278-30-1 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-7-fluoro-N-[4-(phenylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)



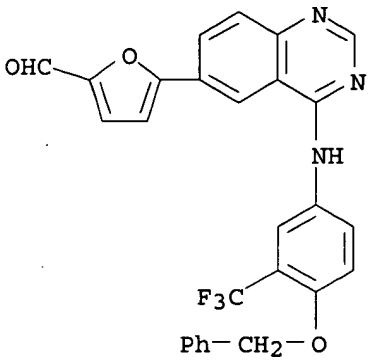
RN 231278-31-2 CAPLUS

10/ 030,527

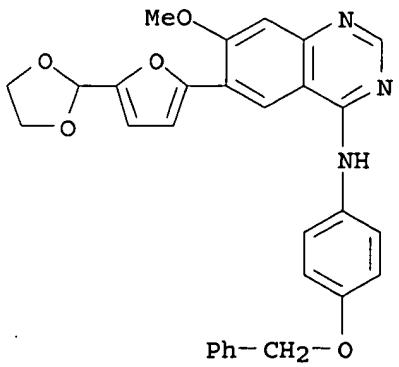
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-N-[4-(phenylmethoxy)-3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



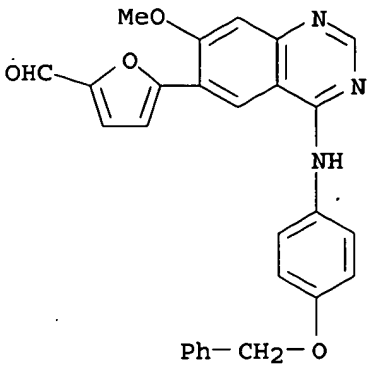
RN 231278-32-3 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-(phenylmethoxy)-3-(trifluoromethyl)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



RN 231278-33-4 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-7-methoxy-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

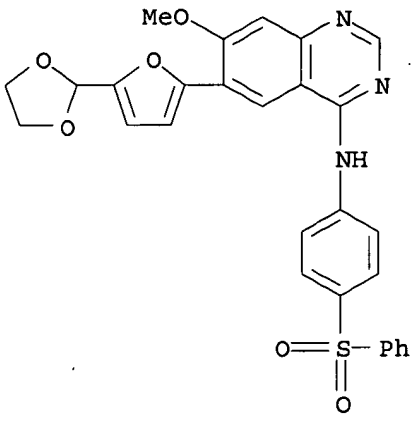


RN 231278-36-7 CAPLUS
CN 2-Furancarboxaldehyde, 5-[7-methoxy-4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)

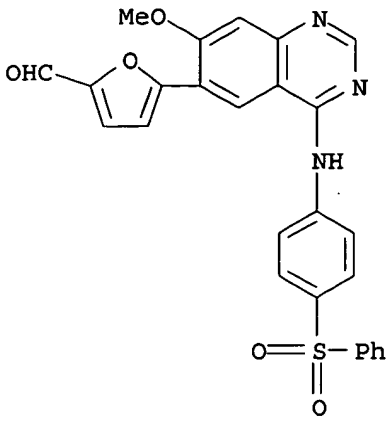


● HCl

RN 231278-37-8 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-7-methoxy-N-[4-(phenylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)

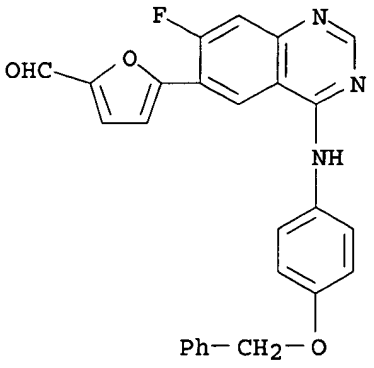


RN 231278-39-0 CAPLUS
CN 2-Furancarboxaldehyde, 5-[7-methoxy-4-[[4-(phenylsulfonyl)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



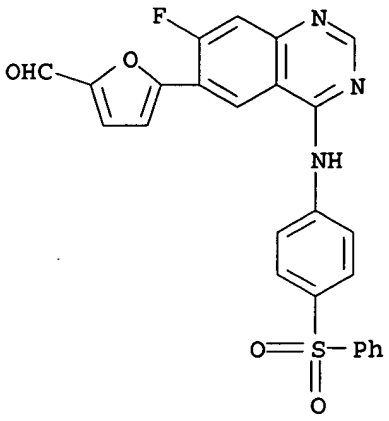
● HCl

RN 231278-40-3 CAPLUS
CN 2-Furancarboxaldehyde, 5-[7-fluoro-4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



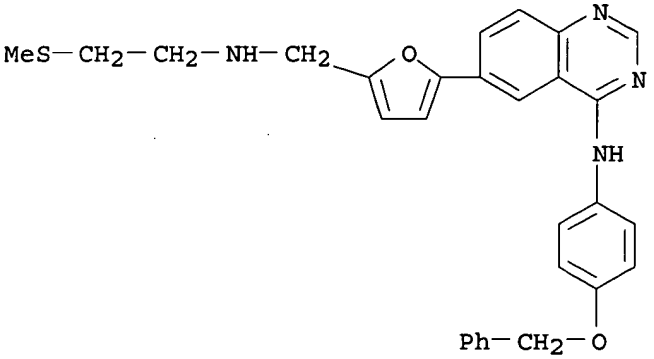
● HCl

RN 231278-42-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[7-fluoro-4-[[4-(phenylsulfonyl)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



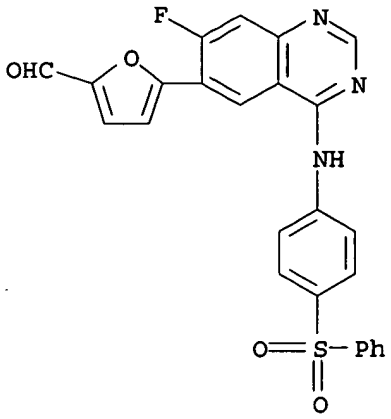
● HCl

RN 231278-46-9 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[[2-(methylthio)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]-, dihydrochloride (9CI) (CA INDEX NAME)



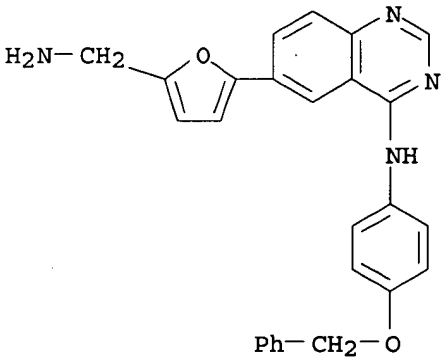
●2 HCl

RN 231278-63-0 CAPLUS
CN 2-Furancarboxaldehyde, 5-[7-fluoro-4-[[4-(phenylsulfonyl)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

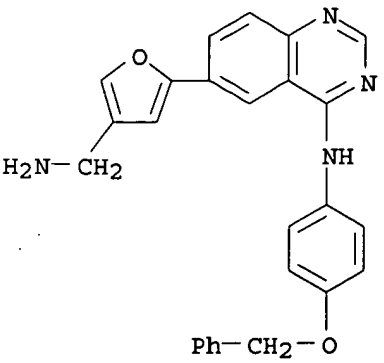


IT **231278-85-6 231278-86-7**
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(metabolite; prepn. of quinazolinamines and analogs as protein tyrosine kinase inhibitors)

RN 231278-85-6 CAPLUS
CN 4-Quinazolinamine, 6-[5-(aminomethyl)-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



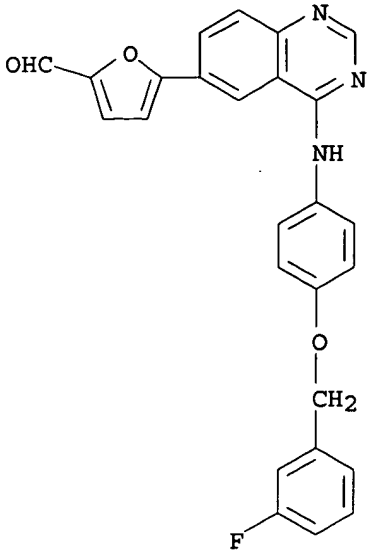
RN 231278-86-7 CAPLUS
CN 4-Quinazolinamine, 6-[4-(aminomethyl)-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



10/ 030,527

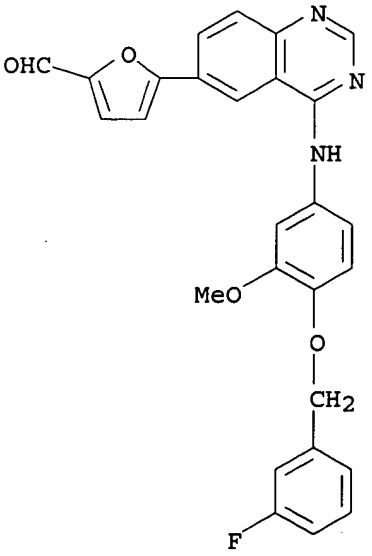
IT **231278-71-0 231278-72-1 231278-73-2**
231278-75-4 231278-76-5 231278-77-6
231278-78-7 231278-80-1 231278-82-3
231278-83-4 231278-84-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; prepn. of quinazolinamines and analogs as protein tyrosine kinase inhibitors)

RN 231278-71-0 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]-, dihydrochloride (9CI) (CA INDEX NAME)



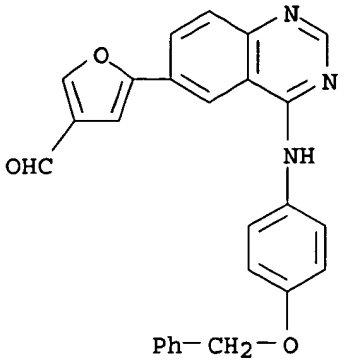
●2 HCl

RN 231278-72-1 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-[(3-fluorophenyl)methoxy]-3-methoxyphenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

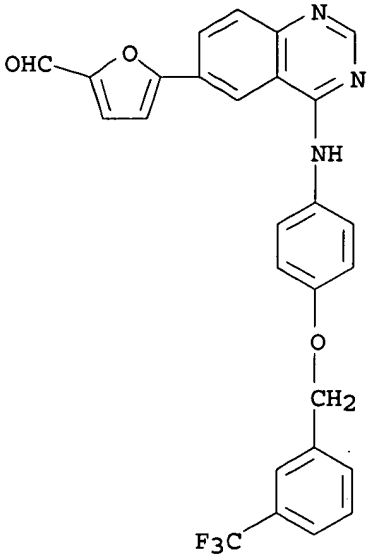


RN 231278-73-2 CAPLUS
CN 3-Furancarboxaldehyde, 5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-

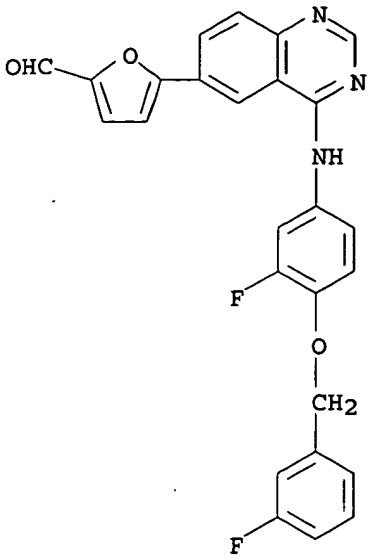
quinazolinyl]- (9CI) (CA INDEX NAME)



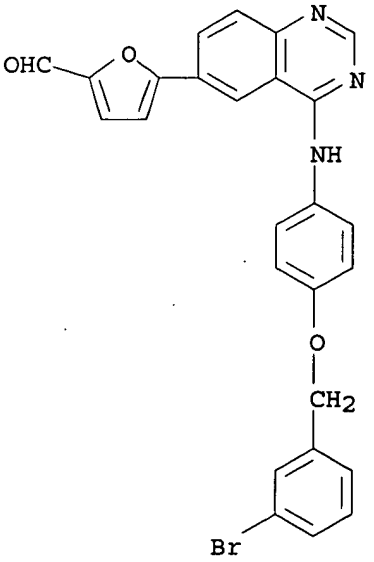
RN 231278-75-4 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-[[3-(trifluoromethyl)phenyl]methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



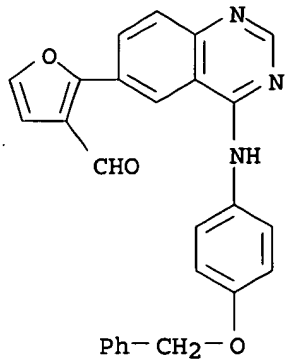
RN 231278-76-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-fluoro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



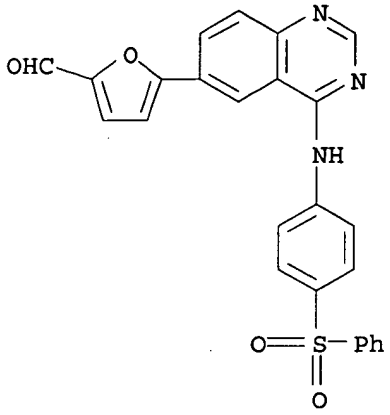
RN 231278-77-6 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-[(3-bromophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



RN 231278-78-7 CAPLUS
CN 3-Furancarboxaldehyde, 2-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

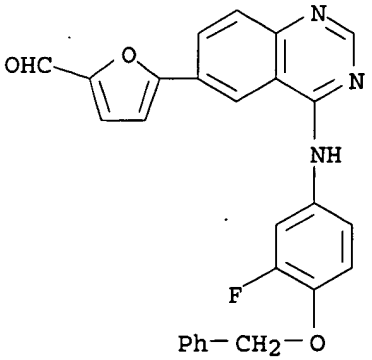


RN 231278-80-1 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-(phenylsulfonyl)phenyl]amino]-6-quinazolinyl]-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 231278-82-3 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-fluoro-4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



RN 231278-83-4 CAPLUS

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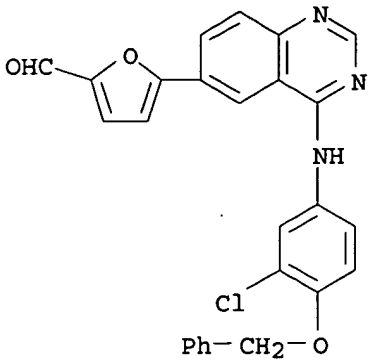
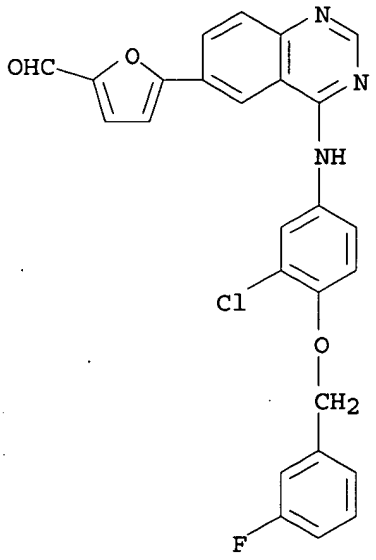
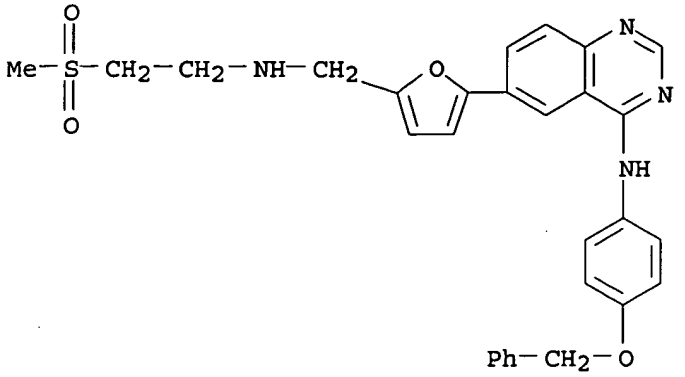
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



RN 231278-84-5 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)

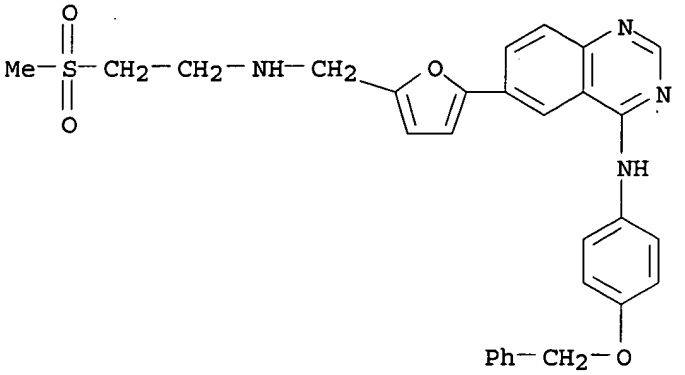


IT **231277-68-2P 231278-05-0P**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(target compd., metab.; prepn. of quinazolinamines and analogs as protein tyrosine kinase inhibitors)
RN 231277-68-2 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]-, dihydrochloride (9CI) (CA INDEX NAME)



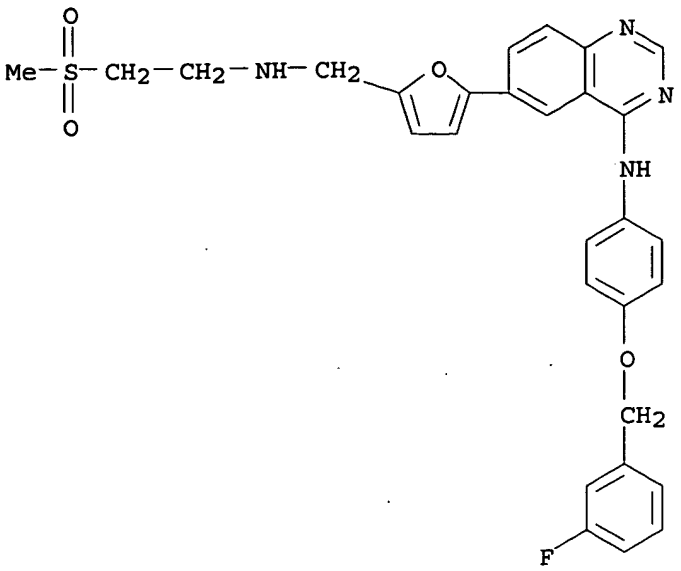
● 2 HCl

RN 231278-05-0 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



IT **231277-71-7P 231277-72-8P 231277-73-9P**
231277-74-0P 231277-80-8P 231277-81-9P
231277-82-0P 231277-83-1P 231277-85-3P
231277-90-0P 231277-91-1P 231277-92-2P
231277-96-6P 231277-97-7P 231277-99-9P
231278-00-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(target compd.; prepn. of quinazolinamines and analogs as protein tyrosine kinase inhibitors)
RN 231277-71-7 CAPLUS
CN 4-Quinazolinamine, N-[4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-, dihydrochloride (9CI) (CA INDEX NAME)

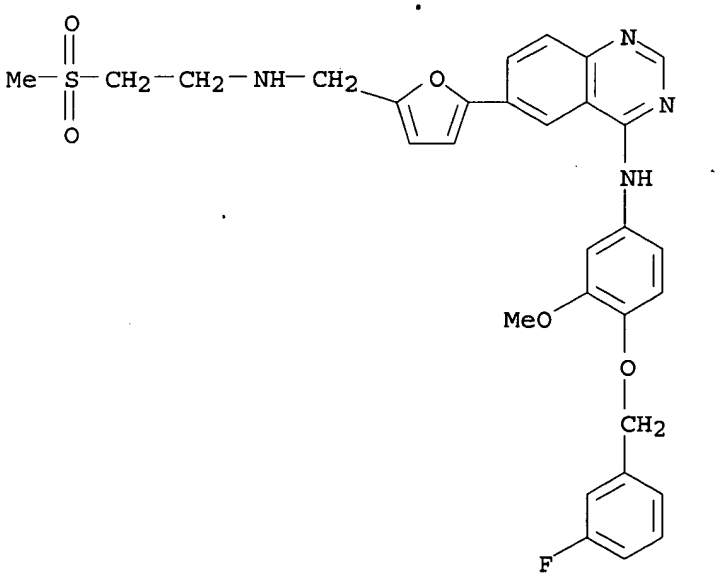
PAGE 1-A



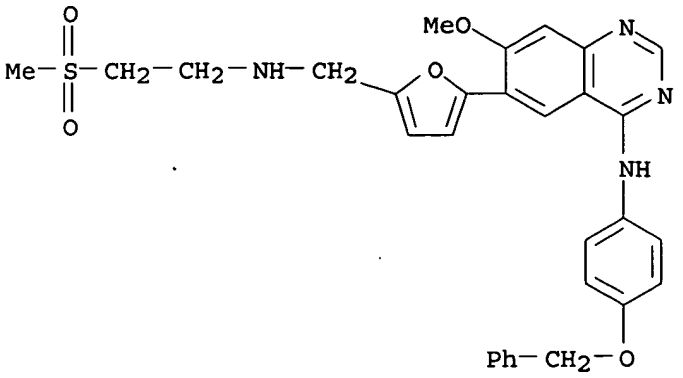
PAGE 2-A

●2 HCl

RN 231277-72-8 CAPLUS
CN 4-Quinazolinamine, N-[4-[(3-fluorophenyl)methoxy]-3-methoxyphenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)

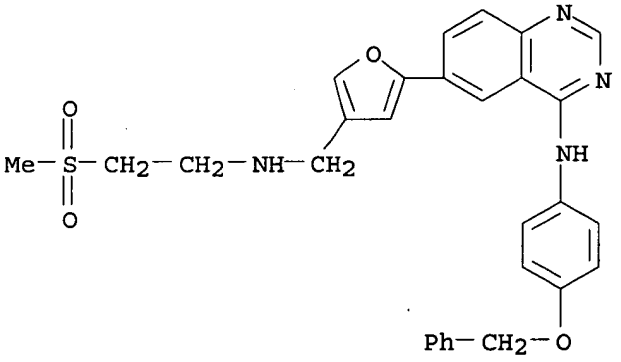


RN 231277-73-9 CAPLUS
CN 4-Quinazolinamine, 7-methoxy-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]-, dihydrochloride (9CI) (CA INDEX NAME)

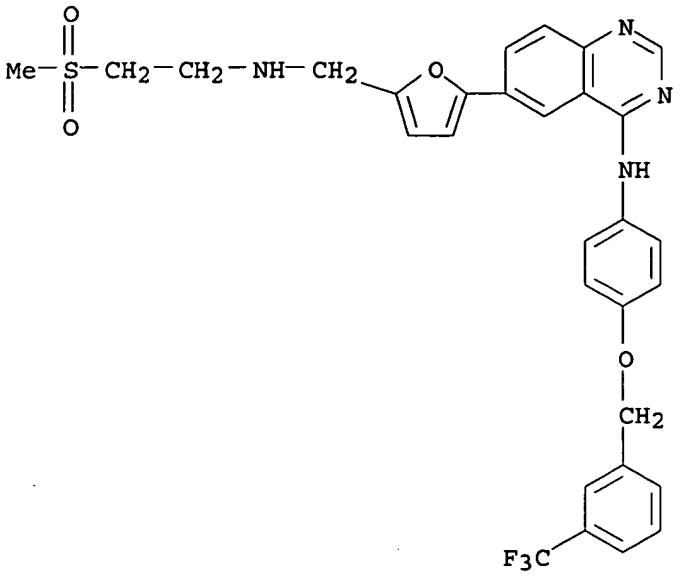


● 2 HCl

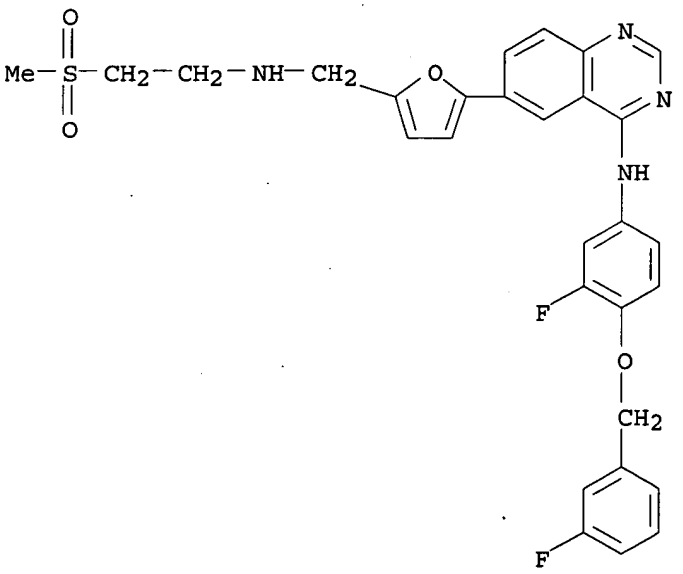
RN 231277-74-0 CAPLUS
CN 4-Quinazolinamine, 6-[4-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



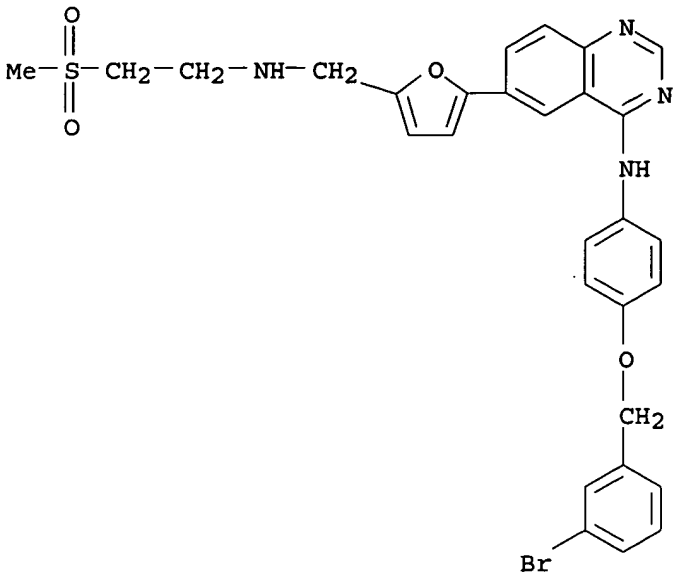
RN 231277-80-8 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-[[3-(trifluoromethyl)phenyl]methoxy]phenyl]- (9CI) (CA INDEX NAME)



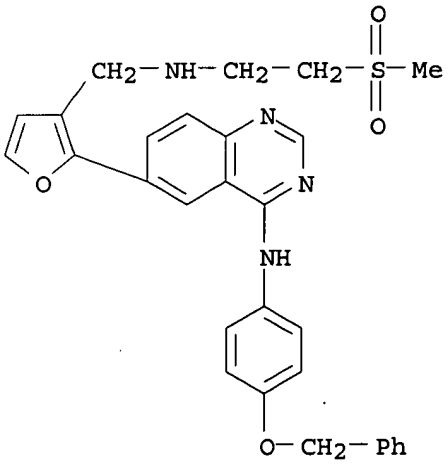
RN 231277-81-9 CAPLUS
CN 4-Quinazolinamine, N-[3-fluoro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



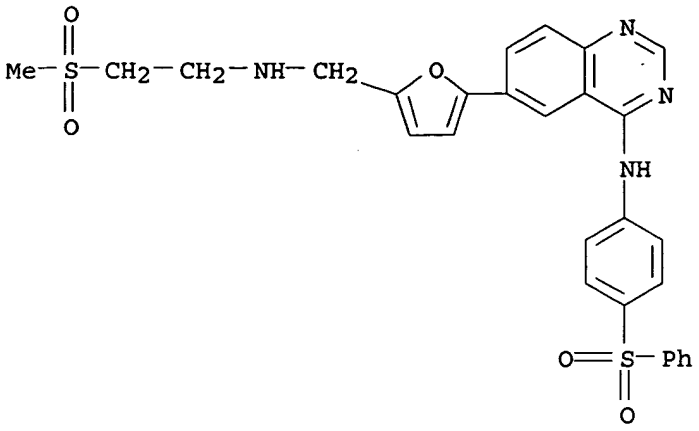
RN 231277-82-0 CAPLUS
CN 4-Quinazolinamine, N-[4-[(3-bromophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



RN 231277-83-1 CAPLUS
CN 4-Quinazolinamine, 6-[3-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

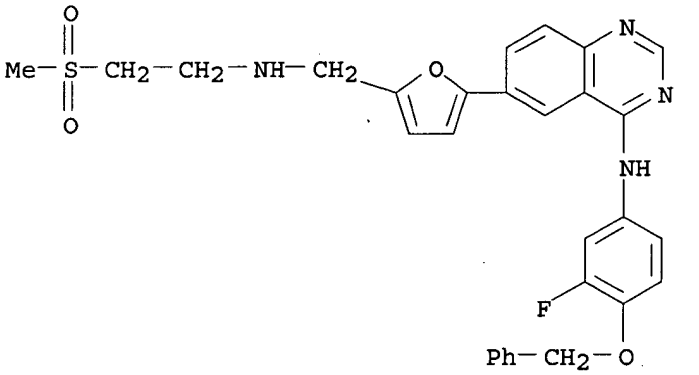


RN 231277-85-3 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylsulfonyl)phenyl]-, dihydrochloride (9CI) (CA INDEX NAME)

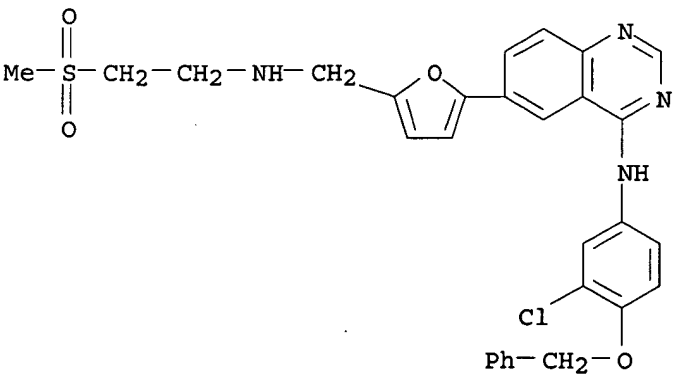


● 2 HCl

RN 231277-90-0 CAPLUS
CN 4-Quinazolinamine, N-[3-fluoro-4-(phenylmethoxy)phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)

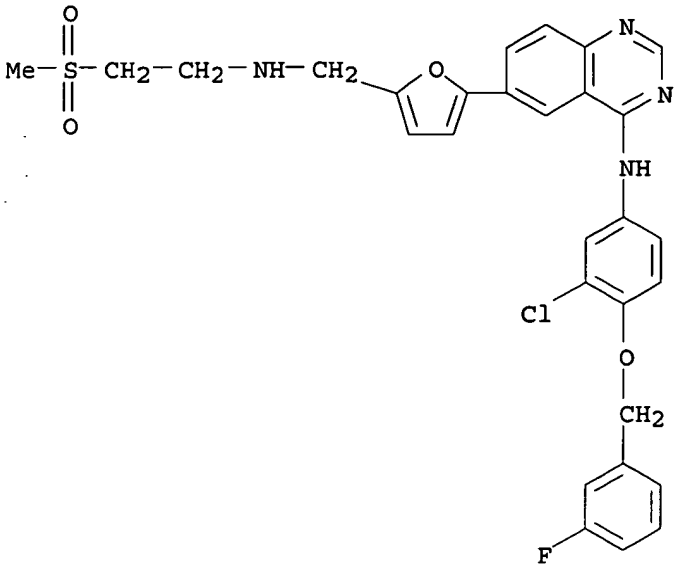


RN 231277-91-1 CAPLUS
CN 4-Quinazolinamine, N-[3-chloro-4-(phenylmethoxy)phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)

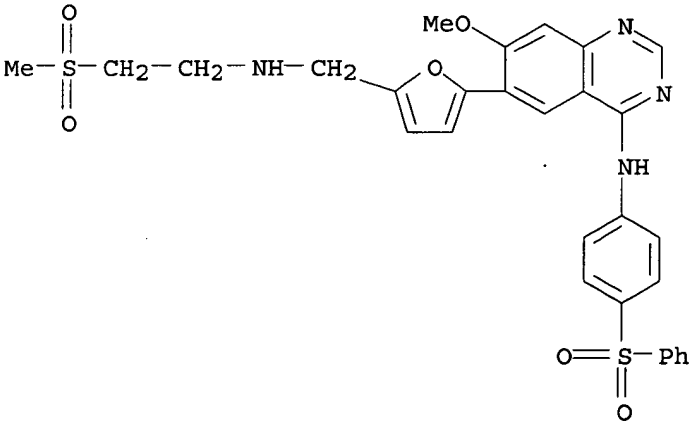


RN 231277-92-2 CAPLUS

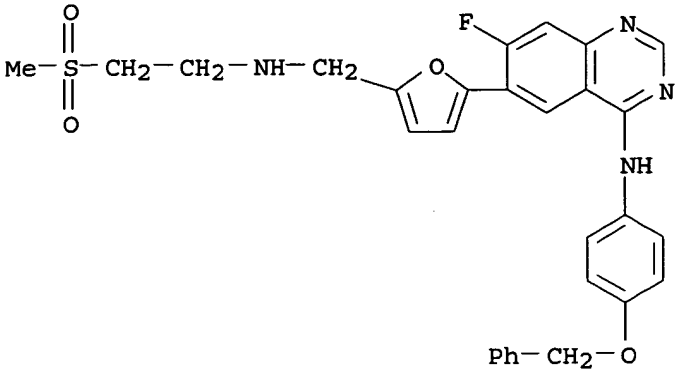
CN 4-Quinazolinamine, N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



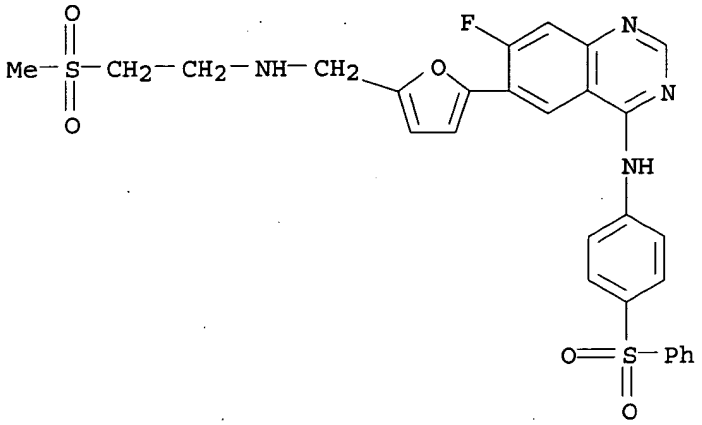
RN 231277-96-6 CAPLUS
CN 4-Quinazolinamine, 7-methoxy-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)



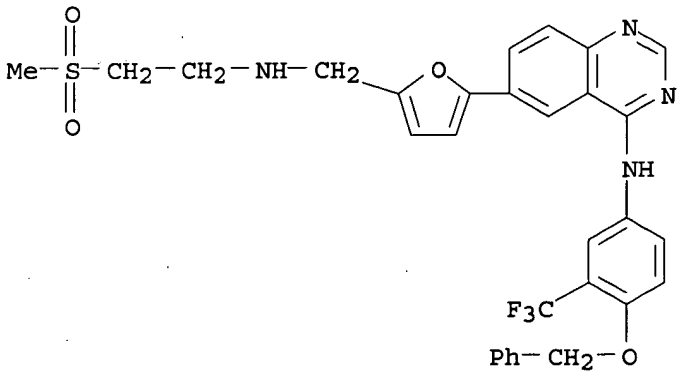
RN 231277-97-7 CAPLUS
CN 4-Quinazolinamine, 7-fluoro-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



RN 231277-99-9 CAPLUS
CN 4-Quinazolinamine, 7-fluoro-6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylsulfonyl)phenyl]- (9CI) (CA INDEX NAME)



RN 231278-00-5 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)-3-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN

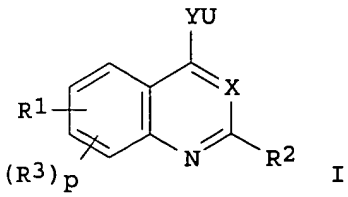
10/ 030,527

ACCESSION NUMBER: 1998:71133 CAPLUS
DOCUMENT NUMBER: 128:140716
TITLE: Preparation of azolylquinazolines and related compounds as protein tyrosine kinase inhibitors.
INVENTOR(S): Cockerill, George Stuart; Carter, Malcolm Clive; Guntrip, Stephen Barry; Smith, Kathryn Jane
PATENT ASSIGNEE(S): Glaxo Group Limited, UK; Cockerill, George Stuart; Carter, Malcolm Clive; Guntrip, Stephen Barry; Smith, Kathryn Jane
SOURCE: PCT Int. Appl., 119 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9802434	A1	19980122	WO 1997-EP3672	19970711
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
ZA 9706147	A	19990111	ZA 1997-6147	19970710
AU 9737668	A1	19980209	AU 1997-37668	19970711
EP 912559	A1	19990506	EP 1997-934458	19970711
EP 912559	B1	20021106		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2000514806	T2	20001107	JP 1998-505596	19970711
AT 227283	E	20021115	AT 1997-934458	19970711
PT 912559	T	20030331	PT 1997-97934458	19970711
ES 2186908	T3	20030516	ES 1997-934458	19970711
US 6391874	B1	20020521	US 1998-214267	19981231
US 2002147214	A1	20021010	US 2002-62647	20020131

PRIORITY APPLN. INFO.:
GB 1996-14755 A 19960713
GB 1996-25458 A 19961207
WO 1997-EP3672 W 19970711
US 1998-214267 A1 19981231

OTHER SOURCE(S): MARPAT 128:140716
GI



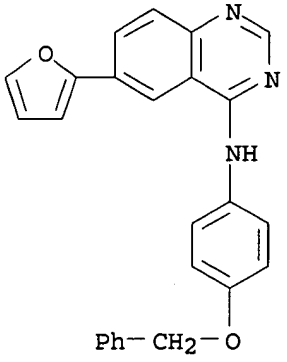
I

AB Title compds. [I; U = substituted Ph, mono- or bicyclic 5-10 membered (hetero)cyclyl; X = N, CH; Y = W(CH2), (CH2)W, W; W = O, S(O)m, NRa; Ra = H, alkyl; m = 0-2; R1 = (substituted) Ph, 5- or 6-membered heterocyclyl contg. 1-4 heteroatoms selected from N, O, S(O)m; with the provision that the ring does not contain two adjacent O or S(O)m atoms and that where the ring contains only N as heteroatom(s) the ring is C-linked to the

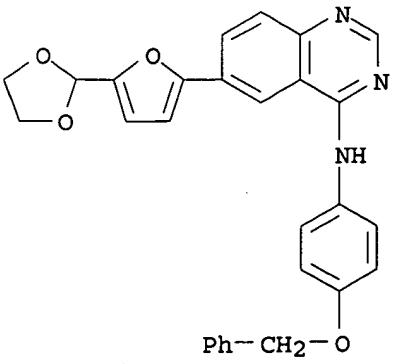
quinazoline or quinoline ring; R3 = H, amino, halo, OH, NO2, CO2H, CHO, cyano, CF3, OCF3, carbamoyl, alkoxycarbonyl, Ph, PhO, pyridonyl, pyrrolidinyl, imidazolyl, dioxolanyl, arylsulfonyl, alkylsulfonyl, alkylcarbamoylalkyl, piperidinoalkoxy, thiomorpholino, etc.; 2 adjacent R3 = methylenedioxy, ethylenedioxy; p = 0-3], were prepd. Thus, (S)-1-[5-[4-(1-benzyl-1H-indazol-5-ylamino)quinazolin-6-yl]furan-2-ylmethyl]pyrrolidine-2-carboxylic acid amide dihydrochloride (prepn. given) inhibited BT474 human breast cancer cell proliferation with IC50 = 2 nM.

IT **202196-33-6P 202196-42-7P 202196-44-9P**
202196-46-1P 202196-47-2P 202196-48-3P
202196-49-4P 202196-50-7P 202196-51-8P
202196-52-9P 202196-85-8P 202196-86-9P
202196-87-0P 202196-88-1P 202196-89-2P
202196-90-5P 202196-91-6P 202197-80-6P
202197-81-7P 202197-82-8P 202198-08-1P
202198-09-2P 202198-10-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of azolylquinazolines and related compds. as protein tyrosine kinase inhibitors)

RN 202196-33-6 CAPLUS
CN 4-Quinazolinamine, 6-(2-furanyl)-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

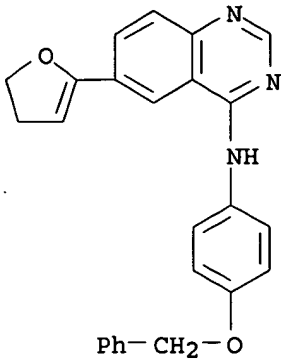


RN 202196-42-7 CAPLUS
CN 4-Quinazolinamine, 6-[5-(1,3-dioxolan-2-yl)-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

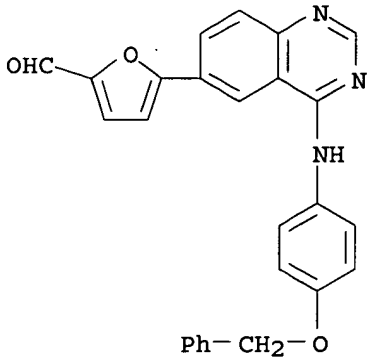


RN 202196-44-9 CAPLUS

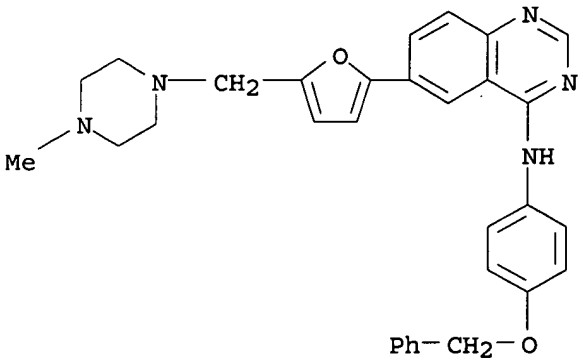
CN 4-Quinazolinamine, 6-(4,5-dihydro-2-furanyl)-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



RN 202196-46-1 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



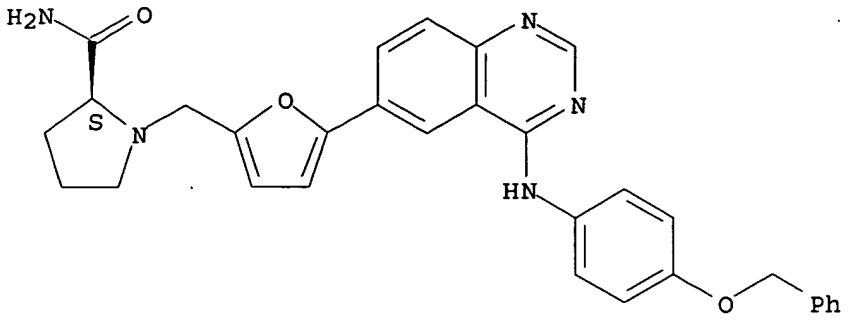
RN 202196-47-2 CAPLUS
CN 4-Quinazolinamine, 6-[5-[(4-methyl-1-piperazinyl)methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



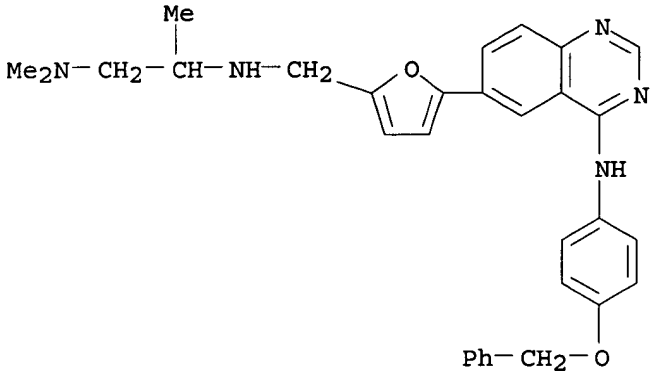
RN 202196-48-3 CAPLUS
CN 2-Pyrrolidinecarboxamide, 1-[[5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-2-furanyl]methyl]-, (S)- (9CI) (CA INDEX NAME)

10/ 030,527

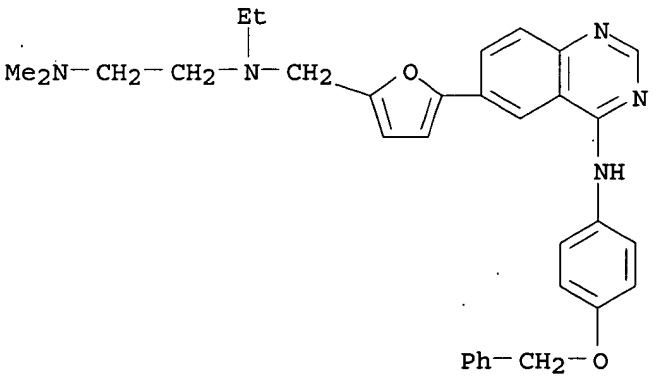
Absolute stereochemistry.



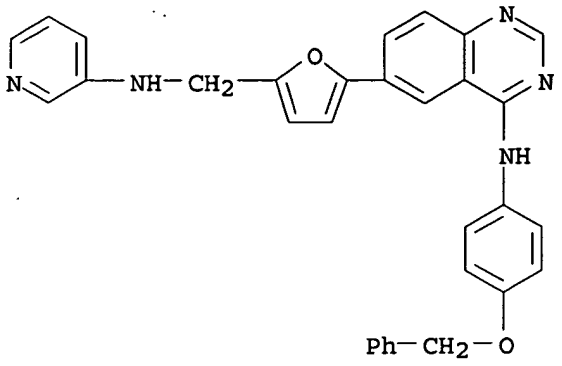
RN 202196-49-4 CAPLUS
CN 1,2-Propanediamine, N1,N1-dimethyl-N2-[[5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-2-furanyl]methyl]- (9CI) (CA INDEX NAME)



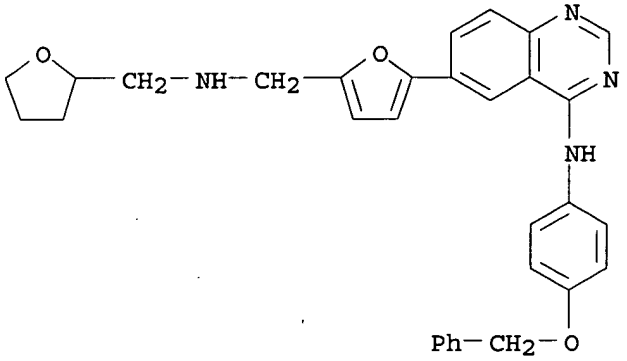
RN 202196-50-7 CAPLUS
CN 1,2-Ethanediamine, N-ethyl-N',N'-dimethyl-N-[[5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-2-furanyl]methyl]- (9CI) (CA INDEX NAME)



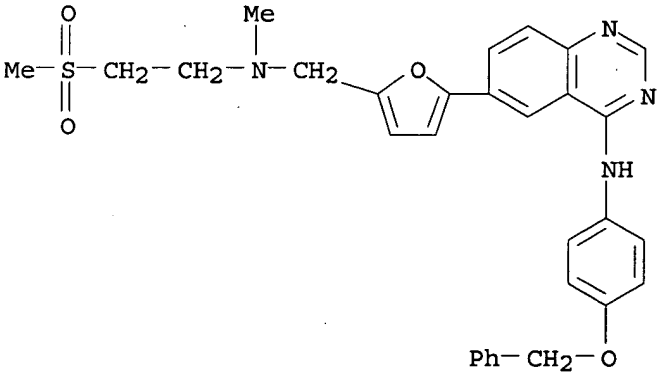
RN 202196-51-8 CAPLUS
CN 4-Quinazolinamine, N-[4-(phenylmethoxy)phenyl]-6-[5-[(3-pyridinylamino)methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



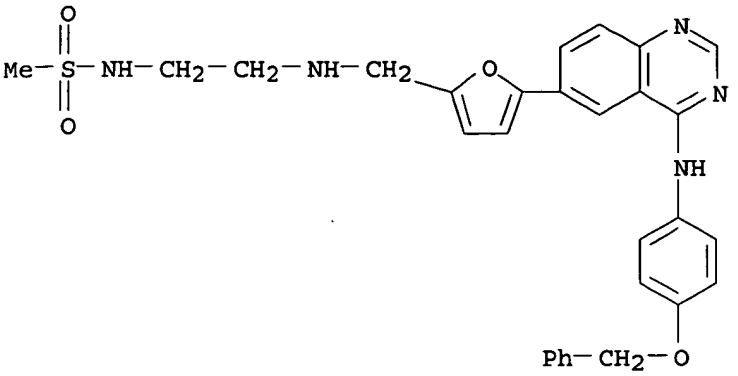
RN 202196-52-9 CAPLUS
CN 4-Quinazolinamine, N-[4-(phenylmethoxy)phenyl]-6-[5-[[[(tetrahydro-2-furanyl)methyl]amino]methyl]-2-furanyl]- (9CI) (CA INDEX NAME)



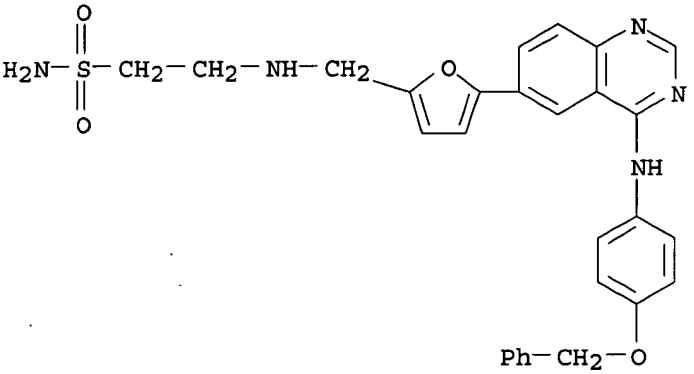
RN 202196-85-8 CAPLUS
CN 4-Quinazolinamine, 6-[5-[[methyl[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)



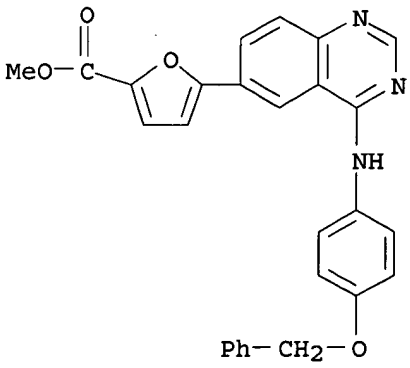
RN 202196-86-9 CAPLUS
CN Methanesulfonamide, N-[2-[[[5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-2-furanyl]methyl]amino]ethyl]- (9CI) (CA INDEX NAME)



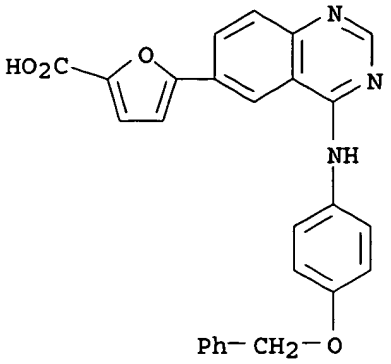
RN 202196-87-0 CAPLUS
CN Ethanesulfonamide, 2-[[[5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-2-furanyl]methyl]amino]- (9CI) (CA INDEX NAME)



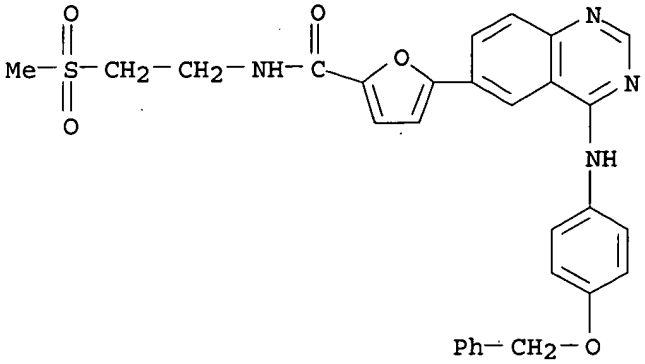
RN 202196-88-1 CAPLUS
CN 2-Furancarboxylic acid, 5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, methyl ester (9CI) (CA INDEX NAME)



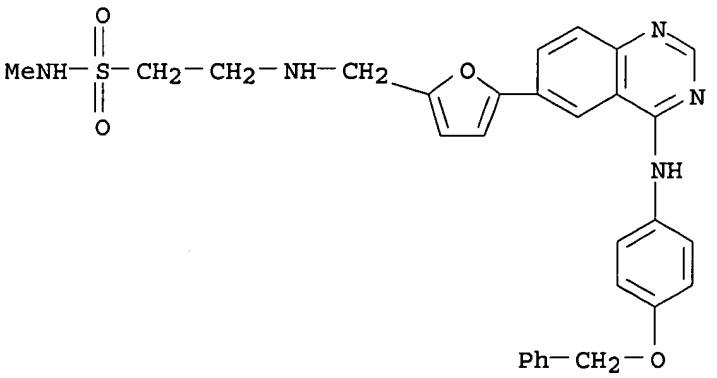
RN 202196-89-2 CAPLUS
CN 2-Furancarboxylic acid, 5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



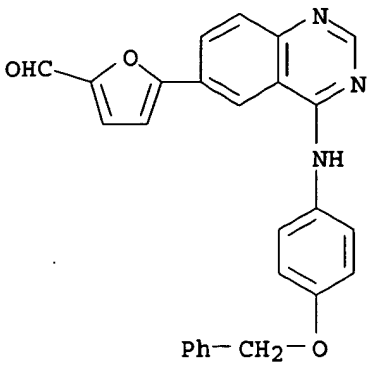
RN 202196-90-5 CAPLUS
CN 2-Furancarboxamide, N-[2-(methylsulfonyl)ethyl]-5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]- (9CI) (CA INDEX NAME)



RN 202196-91-6 CAPLUS
CN Ethanesulfonamide, N-methyl-2-[[[5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-2-furanyl]methyl]amino]- (9CI) (CA INDEX NAME)



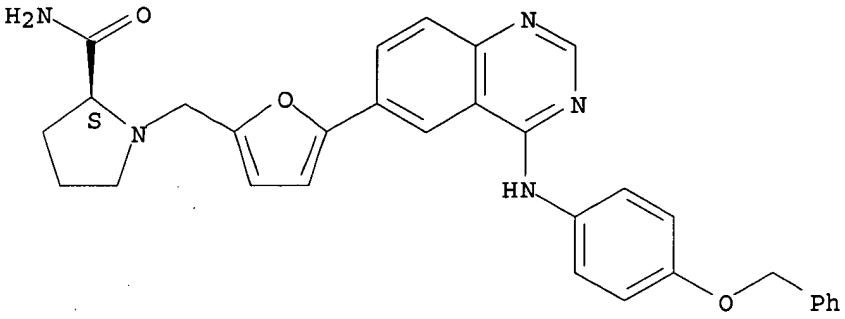
RN 202197-80-6 CAPLUS
CN 2-Furancarboxaldehyde, 5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

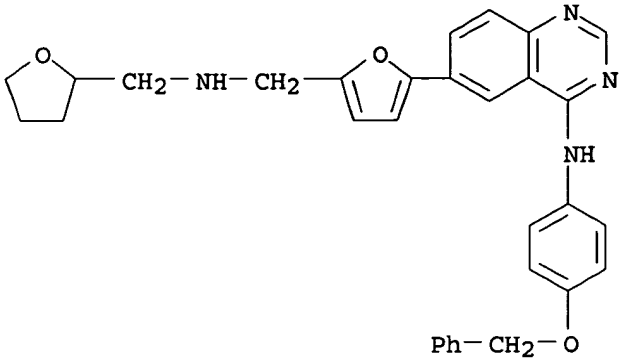
RN 202197-81-7 CAPLUS
CN 2-Pyrrolidinecarboxamide, 1-[[5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-2-furanyl]methyl]-, monohydrochloride, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



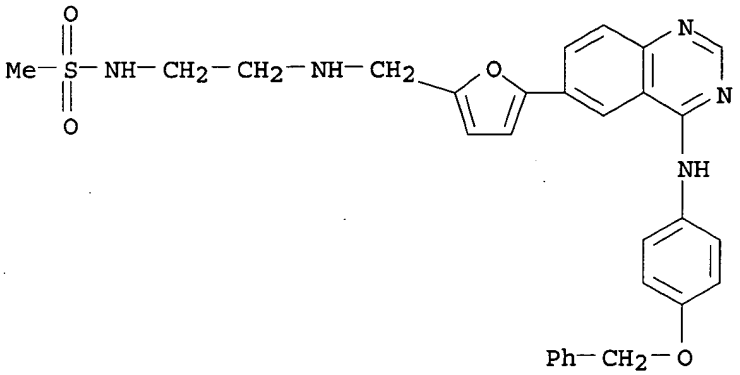
● HCl

RN 202197-82-8 CAPLUS
CN 4-Quinazolinamine, N-[4-(phenylmethoxy)phenyl]-6-[5-[[[(tetrahydro-2-furanyl)methyl]amino]methyl]-2-furanyl]-, monohydrochloride (9CI) (CA INDEX NAME)



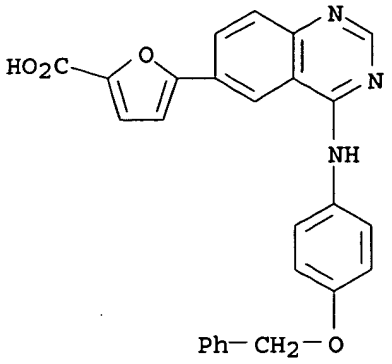
● HCl

RN 202198-08-1 CAPLUS
CN Methanesulfonamide, N-[2-[[[5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-2-furanyl]methyl]amino]ethyl]-, dihydrochloride (9CI) (CA INDEX NAME)



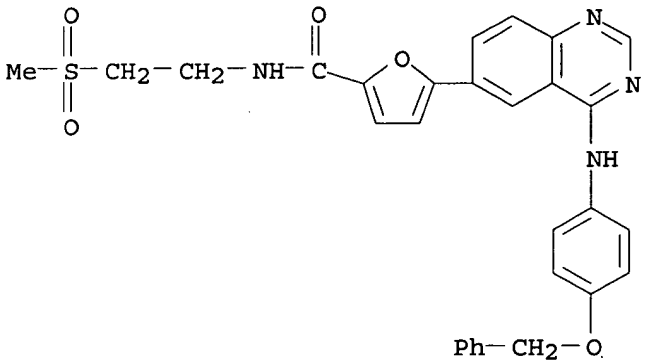
●2 HCl

RN 202198-09-2 CAPLUS
CN 2-Furancarboxylic acid, 5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



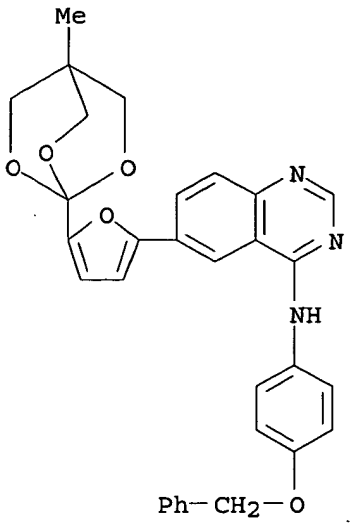
● HCl

RN 202198-10-5 CAPLUS
CN 2-Furancarboxamide, N-[2-(methylsulfonyl)ethyl]-5-[4-[[4-(phenylmethoxy)phenyl]amino]-6-quinazolinyl]-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

IT **202197-65-7P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of azolylquinazolines and related compds. as protein tyrosine kinase inhibitors)
RN 202197-65-7 CAPLUS
CN 4-Quinazolinamine, 6-[5-(4-methyl-2,6,7-trioxabicyclo[2.2.2]oct-1-yl)-2-furanyl]-N-[4-(phenylmethoxy)phenyl]- (9CI) (CA INDEX NAME)

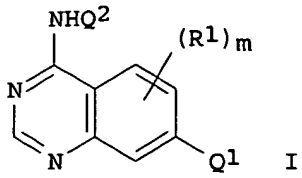


REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:568104 CAPLUS
DOCUMENT NUMBER: 127:220671
TITLE: Preparation of 4-anilino-7-heteroarylquinazolines as tyrosine kinase inhibitors.
INVENTOR(S): Barker, Andrew John; Johnstone, Craig
PATENT ASSIGNEE(S): Zeneca Limited, UK
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9730044	A1	19970821	WO 1997-GB345	19970210
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9716127	A1	19970902	AU 1997-16127	19970210
EP 880517	A1	19981202	EP 1997-902497	19970210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2000505441	T2	20000509	JP 1997-529074	19970210
AT 212022	E	20020215	AT 1997-902497	19970210
PT 880517	T	20020731	PT 1997-97902497	19970210
ES 2171884	T3	20020916	ES 1997-902497	19970210
US 5814630	A	19980929	US 1997-800830	19970213

PRIORITY APPLN. INFO.: GB 1996-3097 A 19960214
WO 1997-GB345 W 19970210
OTHER SOURCE(S): MARPAT 127:220671
GI



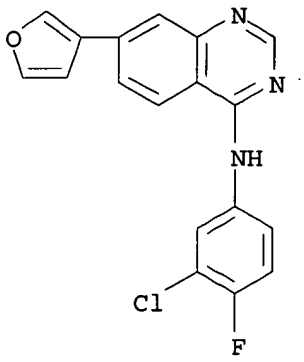
I

AB Title compds. [I; Q1 = (substituted) (benzo-fused) 5-6 membered heteroaryl; m = 1, 2; R1 = H, halo, CF3, OH, amino, NO2, cyano, CO2H, carbamoyl, alkoxycarbamoyl, alkyl, alkoxy, etc.; Q2 = (substituted) Ph], having antiproliferative activity, were prepd. Thus, 7-bromo-4-(3-chloro-4-fluoroanilino)quinazoline hydrochloride reacted with diisopropyl 5-morpholinomethylthien-3-ylboronate to give 4-(3-chloro-4-fluoroanilino)-7-(5-morpholinomethylthien-3-yl)quinazoline. The latter inhibited EGF-stimulated growth of KB cells with IC50 = 0.12 .mu.M.

IT **194851-13-3P 194851-21-3P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of 4-anilino-7-heteroarylquinazolines as tyrosine kinase inhibitors)

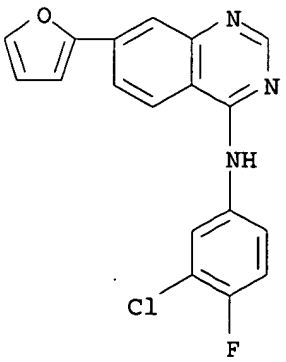
RN 194851-13-3 CAPLUS

CN 4-Quinazolinamine, N-(3-chloro-4-fluorophenyl)-7-(3-furanyl)- (9CI) (CA INDEX NAME)



RN 194851-21-3 CAPLUS

CN 4-Quinazolinamine, N-(3-chloro-4-fluorophenyl)-7-(2-furanyl)- (9CI) (CA INDEX NAME)

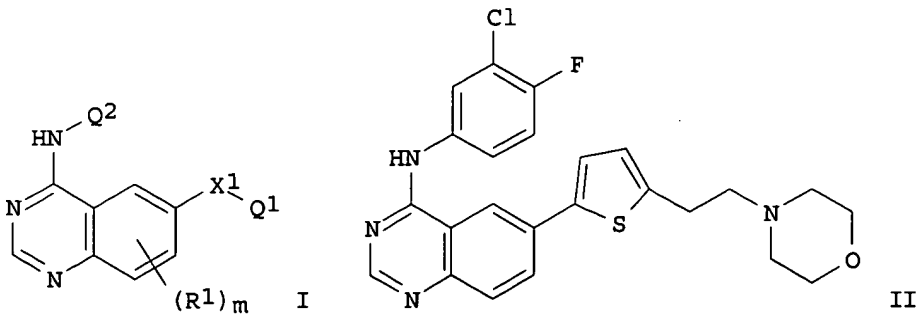


L3 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1997:568090 CAPLUS
DOCUMENT NUMBER: 127:248122
TITLE: Quinazoline derivatives as antitumor agents
INVENTOR(S): Barker, Andrew John; Johnstone, Craig
PATENT ASSIGNEE(S): Zeneca Limited, UK
SOURCE: PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9730034	A1	19970821	WO 1997-GB344	19970210
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2242102	AA	19970821	CA 1997-2242102	19970210
AU 9716126	A1	19970902	AU 1997-16126	19970210
AU 707339	B2	19990708		
EP 880507	A1	19981202	EP 1997-902496	19970210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1211240	A	19990317	CN 1997-192242	19970210
JP 2000504713	T2	20000418	JP 1997-529073	19970210
NZ 330816	A	20000526	NZ 1997-330816	19970210
IL 125685	A1	20021110	IL 1997-125685	19970210
ZA 9701231	A	19970814	ZA 1997-1231	19970213
US 5866572	A	19990202	US 1997-796483	19970213
NO 9803707	A	19981013	NO 1998-3707	19980813
US 6399602	B1	20020604	US 1998-152070	19980911
US 2003018029	A1	20030123	US 2002-136276	20020502

PRIORITY APPLN. INFO.:
GB 1996-3095 A 19960214
WO 1997-GB344 W 19970210
US 1997-796483 A3 19970213
US 1998-152070 A1 19980911

OTHER SOURCE(S): MARPAT 127:248122
GI



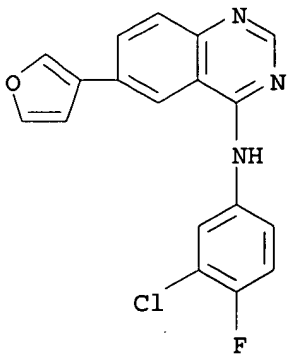
10/ 030,527

AB The invention concerns quinazoline derivs. I [X1 = bond, CO, C(R2)2, CH(OR2), S, C.tplbond.C, O, S, etc.; Q1 = Ph, naphthyl, or 5- or 6-membered heteroaryl optionally bearing 1-3 substituents; m = 1 or 2; R1 = H, halo, CF3, OH, NH2, cyano, etc.; R2 = H, alkyl; Q2 = Ph or 9- or 10-membered bicyclic heterocycle optionally bearing 1-3 substituents] and their pharmaceutically acceptable salts. Also disclosed are processes for prepn. of I and salts, pharmaceutical compns. contg. them, and the use of their receptor tyrosine kinase inhibitory properties in the treatment of proliferative diseases such as cancer. Examples include syntheses of 40 compds. and various intermediates. For instance, Pd(PPh3)4-catalyzed coupling of 6-bromo-4-(3-chloro-4-fluoroanilino)quinazoline-HCl with di-iso-Pr [5-(2-morpholinoethyl)thien-2-yl]boronate (prepns. given) gave 27% title compd. II. At 50 mg/kg/day in athymic nude mice with human vulval epidermoid carcinoma xenografts (cell line A-431), II gave 64% inhibition of tumor vol. (vs. control) after 13 days.

IT **195457-16-0P**, 4-(3-Chloro-4-fluoroanilino)-6-(3-furyl)quinazoline
195457-17-1P, 4-(3-Chloro-4-fluoroanilino)-6-(2-furyl)quinazoline
195457-51-3P, 6-(3-Furyl)-4-[3-methyl-4-(2-pyridylmethoxy)anilino]quinazoline
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of quinazoline derivs. as antitumor agents and antiproliferatives)

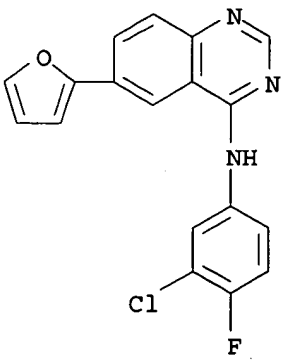
RN 195457-16-0 CAPLUS

CN 4-Quinazolinamine, N-(3-chloro-4-fluorophenyl)-6-(3-furanyl)- (9CI) (CA INDEX NAME)



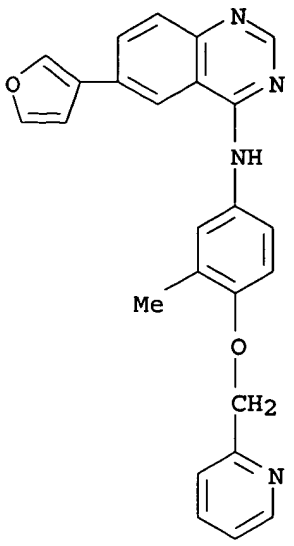
RN 195457-17-1 CAPLUS

CN 4-Quinazolinamine, N-(3-chloro-4-fluorophenyl)-6-(2-furanyl)- (9CI) (CA INDEX NAME)



10/ 030,527

RN 195457-51-3 CAPLUS
CN 4-Quinazolinamine, 6-(3-furanyl)-N-[3-methyl-4-(2-pyridinylmethoxy)phenyl]-
(9CI) (CA INDEX NAME)



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FILE 'CAPLUS' ENTERED AT 08:56:50 ON 05 JAN 2004
L3 20 S L2

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	[redacted]	[redacted]

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	[redacted]	[redacted]

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